



JOINT CENTER FOR OPERATIONAL ANALYSIS

• QUARTERLY BULLETIN •

Volume VII, Issue 3 June 2005



Coalition Forces

Report Documentation Page				Form Approved OMB No. 0704-0188	
Public reporting burden for the collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington VA 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to a penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number.					
1. REPORT DATE JUN 2005		2. REPORT TYPE N/A		3. DATES COVERED -	
4. TITLE AND SUBTITLE Coalition Forces Joint Center for Operational Analysis Quarterly Bulletin, Volume VII, Issue 3, June 2005				5a. CONTRACT NUMBER	
				5b. GRANT NUMBER	
				5c. PROGRAM ELEMENT NUMBER	
6. AUTHOR(S)				5d. PROJECT NUMBER	
				5e. TASK NUMBER	
				5f. WORK UNIT NUMBER	
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) USJFCOM JWFC ATTN: Joint Center for Operational Analysis and Lessons Learned (JCOA-LL) 116 Lakeview Pkwy Suffolk, VA 23435-2697				8. PERFORMING ORGANIZATION REPORT NUMBER	
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)				10. SPONSOR/MONITOR'S ACRONYM(S)	
				11. SPONSOR/MONITOR'S REPORT NUMBER(S)	
12. DISTRIBUTION/AVAILABILITY STATEMENT Approved for public release, distribution unlimited					
13. SUPPLEMENTARY NOTES The original document contains color images.					
14. ABSTRACT					
15. SUBJECT TERMS					
16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT UU	18. NUMBER OF PAGES 48	19a. NAME OF RESPONSIBLE PERSON
a. REPORT unclassified	b. ABSTRACT unclassified	c. THIS PAGE unclassified			



Message From the Director

*BG Anthony A. Cucolo III, USA
Director, JCOA-LL*

Late winter last year I was standing on the tarmac of Bagram Airfield in Afghanistan. I was in a formation of American Soldiers, Sailors, Marines, and Airmen...we were standing at attention, and snapped to "Present Arms" as the Romanian National Anthem began to play. Across from us, a similar formation of Romanian Infantry stood in rigid respect in the Afghan wind, holding their sharp salute. Then, between us, coffins draped in the Romanian colors and holding the remains of Romanian soldiers killed in action slowly passed by and were carefully loaded on to a C-130 aircraft to take them home. If there was ever a moment when two allies felt like "we're in this together," it was at that moment. And, unfortunately, the war on terrorism has replayed and will replay that moment over and over again.

To American forces, the late 20th century challenge of learning to fight "joint" has been replaced by the early 21st century challenge of learning to fight "combined." And, in my personal opinion, we need to address and overcome this particular challenge even faster than we did the last. The war on terrorism will not wait for a long term solution. We therefore dedicate this particular issue of our bulletin to coalition warfare.

Internal to the US Armed Forces, we're not perfect at fighting joint — but we're a long way from the days of calling separation of forces and "deconfliction" of a battle space a joint operation. In many areas, the Services are well integrated and, in many respects, quite dependent upon one another.



We acknowledged in the early '90's that only rarely would we conduct significant operations as a Nation alone. Combatant Commands' Theater Security Cooperation Plans emphasized interaction and developing relations with the forces in their region. Operations have built (I would even say "piled-on") these existing regional relationships with allies gained in training exercises like BRIGHT STAR and COBRA GOLD, contingency operations like Bosnia, Kosovo, and relief operations across the globe. But for a variety of reasons, moving toward a more integrated and interdependent coalition force is incredibly difficult.

Those words (and words like them) — *integrated*, *interdependent* — mean so much and present such a degree of complexity that progress requires our full attention in training, concept development, experimentation, and the fielding of new technology. Those words mean understanding culture, political limitations, and the more mundane aspects of tactics, techniques, and procedures; they mean open collaboration at multiple levels; they mean sharing — sharing information, risk, cost, and losses in equipment and personnel.

Look at where we and our allies are fighting and dying at this writing: *Mutlinalional* Force-Iraq, *Multinational* Corps-Iraq, *Combined Forces* Command-Afghanistan, *Combined* Joint Task Force — 76, and a number of *multinational* divisions and brigades. Walk in to the operations centers of Baghdad and Bagram, look at the mix of uniforms, and listen to

the variety of languages. Many of these officers and enlisted personnel are not just liaisons, but members of the primary staffs. And, it is too easy to forget that members of the host nation armed forces are also members of this coalition force...the critical necessity of integrating and sharing with the Iraqi and Afghan armed forces adds to the complexity for all.

But the good news is, from the crucible of necessity and combat have grown solution sets to many of these challenges. And, more importantly, we are raising a generation of leaders with “scar tissue” of having to make a coalition work: figuring solutions to data and information sharing, working through foreign disclosure limitations, and dealing with the frustrations of national caveats and political limitations. As these leaders – both US and non-US — continue to serve and progress, they will drive us to real solutions and help overcome these challenges.

Plus, we can also look for “best practices” amid the long standing allied relationships in US Southern Command, in Combined Forces Korea, and in Pacific Command — where Coalition Support Force – 536

superbly led the execution of multinational military support during the tsunami relief effort this past winter. At these locations and among these efforts we can learn much that can take us down the road to greater integration and great interdependency for successful coalition operations.

Finally, I have found that I always learn the most from *listening* to our allies discuss these challenges in their own words. From them I get their perceptions (their reality) of how things are, mixed with their view of the facts. To that end, and most appropriately, some of the best input to this issue are written by non-US contributors. We hope you find this issue valuable.

A handwritten signature in black ink, appearing to read 'AAC', with a stylized, overlapping design.

ANTHONY A. CUCOLO III
Brigadier General, U.S. Army
Director, Joint Center for Operational Analysis and
Lessons Learned



JCOA-LL UPDATE

Mr. Bruce Beville, GS-15
Deputy Director JCOA-LL

The Joint Center for Operational Analysis and Lessons Learned (JCOA) has made several new changes in the last three months that will have a significant impact on how we support the warfighter. Along with organizational restructuring and personnel changes, we are working toward a process where our data is more accessible to organizations outside JCOA, while at the same time protecting our customer's interests by maintaining the same strict non-disclosure policies of the past. JCOA continues to encourage information sharing, beginning the process of making its information available via the Secret Internet Protocol Routing Network (SIPRNET). A slow, tedious process, but well worth the effort. Several reports are already completed and are being made available online. In addition, pending Joint Forces Command (JFCOM) senior leadership approval, JCOA will become the central repository for all joint lessons learned—thus taking advantage of a state of the art JCOA data mining and storage capacity.

Our collection teams in Iraq and Afghanistan are continuing to collect valuable data related to Director, JCOA driven focus areas. Some of the data is protected under the non-disclosure guidelines, but most is not. In order to make all the data accessible that is not subject to non-disclosure rules, we are developing two data bases; one for protected data and one open to other organizations for their research. Department of Defense (DOD) organizations are invited to participate with JCOA deployed teams for mutually agreed collection and analysis efforts. The expected result of these efforts is better and faster penetration of the actionable operational lessons and increased mutual support for identifying solutions to transformation issues.

In other news, the Studies and Analysis (S&A) Division recently reorganized and implemented refined procedures to further improve the coordination between forward collection teams and analytical support in Suffolk, Virginia, with the objective of accelerating the development and distribution of findings. LTC (P) Bill Dolan, U.S. Army, recently arrived from the Joint Advanced Warfighting Course to assume duties as Chief of the S&A Division. Product status includes the recent release of the Haiti Lessons Learned Report

for Operation SECURE TOMORROW, which is now available on the classified JCOA website; the Medical Report Briefing approved for release on 13 July 2004 (also available on the classified JCOA website), and which has already been briefed to a wide variety of audiences to include Commander, U.S. Central Command, and the Secretary of Defense; and the Operation IRAQI FREEDOM (OIF) Stabilization, Security, Transition, and Reconstruction Report, covering the period from June 2003 to June 2004, which is now in the final approval stages prior to release.

Through the Transformation Division, JCOA is supporting Mission Rehearsal Exercises (MRX) for senior headquarters deploying to both Iraq and Afghanistan. The support is provided from design and objective definition through execution of the training event, working alongside JFCOM J7 Training and Exercise Support personnel. Additionally, members of JCOA's collection team, deployed to Iraq and Afghanistan, are bringing current operational perspective to the training audience.

Finally, the June 2005 Worldwide Joint Lessons Learned Conference was held in Northern Virginia, hosted by Maj Gen Jack Catton and the Joint Staff J7 organization. This year's conference included representatives from the United Kingdom, Canada, and Australia, who participated in discussions on ways to better share information and lessons learned between the nations. This discussion is in line with the recently signed memorandum of agreement between BG Tony Cucolo, Director of JCOA, and his U.K. Brigadier counterpart. Other panels and discussion groups throughout the conference focused on current technologies available to upgrade the data storage and sharing systems; taxonomies for categorization of data; and, methodologies used by the various lessons learned organizations to better integrate lessons search and sharing capabilities.

"Experience is not what happens to a man. It is what a man does with what happens to him."

Aldous Huxley

Contents

Coalition Building	1
Operations in Iraq: Lessons for the Future WORKING IN A COALITION	4
The ABCA Armies' Program and Coalition Lessons	7
Operational Evaluation of the Middle East Area of Operations	12
A New Way to Wage Peace:	
US Support to Operation <i>Stabilise</i>	22
Proliferation Security Initiative:	
Lessons from a Cooperative Framework	29
ACT process similar to JFCOM's	
NATO Command Fine Tunes Operational Lessons Learned Practices	32
Canadian Forces (CF) Joint Staff:	
Profile On J7 Lessons Learned	34
JCOA-LL Points of Contact	37

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Coalition Building

Professor Craig Ernest Maddron
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What is Coalition Building?

Coalitions represent temporary alliances and partnering of groups that are focused on similar achievements. They are joined in an effort to achieve a common goal or joint activity. Coalition building mandates that each party (individuals, organizations, or nations) come together to form an effective coalition. By forming a coalition, smaller groups combine with other similar or larger groups, with shared interests and goals. This association facilitates resource combination, and the coalition becomes more powerful and effective than when they each acted unilaterally.

Why Coalition Building is Important?

The “ability to build coalitions is a basic skill for those who wish to attain and maintain power and influence.”¹ By utilization of coalition mechanisms, weaker members/parties to a conflict or potential crisis increase their power and influence. Coalition building is the “primary mechanism through which disempowered parties can develop their power base and thereby better

defend their interests.”² This formation can effectively shift the balance of power and allow weaker members/parties to maintain their presence and power structures and alter conflict conclusions and conditions.

How Do You Build a Successful Coalition?

Successful coalitions are forged with the “common understanding” and recognition of compatible interests that are capable of existing together in harmony. Coalition building can occur with little external effort when a “common goal” is realized. In other instances, potential coalition members must be persuaded (economically) to form coalitions. Various governmental, diplomatic, and economic strategies may be introduced to effect coalition subscription. Reluctant coalition partners must be communicated with effectively at all levels, specifying goal similarity, group and region enhancement, and reminded that the coalition effort will provide greater returns than individual action.

Often in the turn of world events effective coalition partners are reluctant to join the coalition team. In efforts to motivate nonparticipants, economic and political incentives can be presented. The economic and political parties will develop a series of moral, rational, and emotional appeals to reluctant parties. Government agencies will also rely on past relationships between



nations as a foundation for talks, thus providing a mechanism for effective coalition communication. Finally, economic penalties, such as sanctions, can be introduced. Effective measures would also eliminate alternatives to the coalition, making the prospects of joining even greater.

What are the Benefits of Coalitions?

The near term benefits of coalition membership may be extremely high, but the long-term coalition membership may provide greater long-term benefits. These long-term benefits are realized in a nation's internal and external strength capacities. This strengthening can provide "spill over" effects in other areas; as well as, strengthening both the confidence and abilities of their populations.

Advantages of Working in a Coalition:

- Working as a member of a team allows coalitions to focus on different fronts and effectively operate in more directions than working alone; increasing their potential for success.
- Effective coalitions assert more expertise and resources on complex issues and time sensitive dilemmas. This is extremely beneficial in situations where an individual member may not possess in theater experience.
- Leadership development is forged in the coalition environment. This development can produce returns after the present coalition is expired and presents a pool of assets for continued coalition dialogue.
- Organizational/coalition impact will be increased due to organizational efforts. Coalition involvement involves more understanding on current/relevant issues.
- Resources increase with coalition membership. Abstract and concrete assets, as well as financial assets, are better shared in the coalition environment. Coalition members will gain access to contact, connections, and networking with other members.
- Coalition involvement may effectively broaden the impact and widen the parameters of current and future coalition interests. The attention and benefits of media coverage are enhanced in coalition participation.

- Coalition members are more clearly defined and individual definitions are better established. This establishment will add to the definition of the coalition.
- Coalition involvement can establish platforms for increasing and permanent change. Coalition strength and involvement make the dismissal or noninterest of issues difficult by noncoalition members.
- Coalition involvement may include individuals, groups, and nations who have never worked together before. The differences of coalition members must be acknowledged and respected as they concentrate on effective coalition participation. This strategy will increase effective communication between all members and facilitate the mandate for effective planning, which will avoid issues such as duplication of effort.

Disadvantages of Working in Coalition:

Coalition involvement can easily become overshadowed with individual member issues. Many times domestic issues prohibit coalition involvement. This occurrence can prove to be detrimental to the coalition effort. As there are unique assets and resources that a coalition brings to the environment, so are there unique differences and issues. One effect is that disenfranchisement of a coalition member may occur if coalitions are not adequately organized to allow involvement of all members in issue resolution. Consequently, they may feel as if they are not getting a full return on their investment. These investments include time, effort, assets, and most importantly, they may involve the loss of lives.

Although the coalition was developed to act in unison, coalition members may expect individual treatment and individual negotiation. This may pose difficulties within the coalition as the issues that formed the coalition dissipate and lose momentum. The coalition members may feel that the issue is not "exciting" enough to warrant additional resources and loses its base of support.

As conditions change in both the coalition effort and the original issues for coalition involvement, each member to the coalition may feel as if they are not being properly rewarded, or that their resources are being properly manifested. This may occur naturally as the coalition effort evolves, but can be effectively addressed by implementing monitoring systems that address the

relationships between less than powerful and powerful groups within the coalition.

Economic and Diplomatic Concerns:

- Lack of trust/confidence with current administration.
- International reputations are involved.
- Sense of disenfranchisement and frustration.
- Lack of input/leadership roles in coalition operations.
- Internal population turbulence/civil disobediences.
- Religious intolerance—a party of religious defense (Christian Democracy).
- Economic and political repercussion for not joining coalition.
- Weapons of mass destruction/weapons of mass effects/terrorism protection may be involved.
- Bargaining coalition issues; debt relief, military base infrastructure improvement, public health, sanitation, and utility upgrades.
- Casualties, kidnappings.
- Substitution of host country labor/retrained/reindoctrinated military forces to relieve coalition forces.
- Discontent with extreme proportional representation and its consequences, and to some degree also with the existing form of parliamentary governments.
- Territorial diversity in the political outlooks of different areas of the country.
- Delegitimization of the old governing parties.
- Growing electoral volatility and the emergence of new political parties.
- Electoral reform enforced by referendum.
- Public policy determined by external market forces.
- Government by technocrats.
- Dictatorship versus democracy; Socialist or social democrat party; Communist Party; Fascism/Monarchism; territorial parties.

The Bottom Line

Coalition participants must engage in rational, emotional, and moral decision-making. Rationally, members must decide whether their present and future effectiveness and the ability to maintain autonomy, self-directing freedom and, especially, moral independence in their own goals should they join a coalition. Would these be enhanced or harmed by coalition participation? Emotionally, countries must consider agreement with other populations or groups. They must consider the levels of involvement in coalition membership. Will they be easy or more trouble than they are worth? Morally, the coalition must reflect on issues such as human rights abuses, ethnic cleansing, and their ability to come to the aid of others. Rationally, countries must consider whether their effectiveness and the ability to attain their own goals would be enhanced or harmed by participation in a coalition. Emotionally, countries must consider whether they like the other populations or groups, and whether cooperating with them would be easy, or more trouble than it is worth. Usually, when two nations, groups, or organizational goals are compatible, forming a coalition is of benefit to both; however, country, organizational and individual styles, cultures, and relationships must be fully considered before any choices are made.

About the Author:

Professor Craig Maddron is a contractor with General Dynamics, and a member of the Joint Warfighting Center Support Team. He participated in MNE-3 (Multinational Experiment) while working as a member of the J9/White Cell. Maddron is also an adjunct professor at ten (10) universities and is ABD (All But Dissertation) in his Ph.D. (Organizational Management) with Capella University. He has published at eight (8) symposiums in the last 20 years and is active in various professional associations. He was previously assigned as a United Nations Officer in Kosovo with UNHCR, and currently works as a military analyst with the Joint Center for Operational Analysis and Lessons learned (JCOA-LL) in Suffolk, VA.

Endnotes:

¹Michael Watkins and Susan Rosegrant. "Building Coalitions." In *Breakthrough International Negotiation: How Great Negotiators Transformed the World's Toughest Post-Cold War Conflicts*. (San Francisco: Jossey-Bass Publishers, 2001), 211.

²"Coalition Building," op.cit

Operations in Iraq: Lessons for the Future

WORKING IN A COALITION

[Chapter 7]

Key lessons

- Close United States (US)/United Kingdom (UK) working relationships and liaison, both military and civilian, at all levels were key to coalition planning for the operation. Such relationships should continue routinely to be cultivated at every level with the US and other potential coalition partners. However, each coalition operation will be different, and key liaison appointments and requirements should be reviewed at the outset of planning for a new operation.
- The implications of maintaining contact and congruence with US technological and doctrinal advances should continue to be assessed.
- The UK must be prepared to operate with both traditional allies and less familiar partners. UK forces must be organised, trained and resourced for interoperability with partners.
- The UK's efforts to encourage key allies early on to contribute to the stabilisation force in Iraq were successful. Co-operation between MOD [Ministry of Defense] and the FCO [Foreign Commonwealth Office], and co-ordination between the UK and the US, were key to this success.
- The coalition secured important assistance in the build-up to the conflict from a wide range of countries. However, Host Nation Support cannot be taken for granted: the UK should continue to cultivate both existing and potential international partners in emerging trouble spots in order to ensure access.
- Regular training and cross-fertilisation with US forces are required to promote interoperability when UK forces are deployed in a US-led or backed coalition. Achieving interoperability requires extensive information sharing between the US and UK.
- A Combat identification (Combat ID) concept of operations should be available early in the preparation phase of an operation. Doctrine and peacetime training need to reflect the Combat ID requirements of coalition operations.

Coalition Strategic Planning

7.1 Given the scale of its force contribution, the US inevitably led the planning for the campaign against Iraq. *First Reflections*¹ described how, although the UK did not make final decisions on the composition and deployment of its force packages until early 2003, we were able to work closely with the US and influence the campaign from initial planning to execution. This was achieved through high-level political contacts and regular dialogue at official level, as well as by the presence of embedded UK officers in key US headquarters.

7.2 The US is expected to continue to play a leading role in world affairs for the foreseeable future and remain the predominant military superpower. If the UK

is to join the US in future operations, we shall need to continue to be close to US policy-making and planning and, subject to affordability, be able to operate with its technological dominance and military doctrine. This will require a clear understanding of, and involvement in, emerging US military and political concepts and doctrine. To this end, it will be essential to continue to sustain liaison with high levels in the Pentagon and key US headquarters.

7.3 Different groups of nations will continue to contribute to international and regional security in response to rogue states, terrorism and trans-national threats. In this context, UK forces, in addition to working with the growing coalition of nations now in Iraq, are likely to continue their current deployment pattern in

support of North Atlantic Treaty Organization (NATO), European Union (EU), and United Nations (UN) operations. However, the UK may also have to operate with unfamiliar partners and address consequent problems with force packaging, standardisation of procedures and equipment, and Combat identification (Combat ID). In this context, the significant contribution by UK Defence and Liaison staffs overseas, including Defence Attachés, to the planning and prosecution of the Iraq operation, underlined the importance of understanding the particular national sensitivities and objectives of allies and other nations.

Wider International and Coalition Issues

7.4 The UK played a major role in bringing key allies into the coalition through co-ordinated lobbying with the US. A coalition of some 40 countries was rapidly assembled, committing troops, providing logistical or basing rights or giving political support. This commitment has been sustained and expanded by ongoing diplomatic dialogue and by a number of conferences held in London by FCO and MOD. There are now 32 states contributing forces to the Multinational Stabilisation Force in Iraq, of which nine are in the UK's area of operations.

7.5 Despite differences in the UN Security Council, the UK continued to work well with UN operations and agencies before and after the conflict. The UK also developed a good relationship with the International Committee of the Red Cross (ICRC) both in London and in theatre. UK support enabled ICRC staff to remain

in Iraq and provide services during the conflict whereas most Non-Government Organisations (NGO) and the UN withdrew. The Department for International Development also maintained a good relationship with the NGO community. Cooperation with the US and Japan at official level helped ensure that the International Energy Agency managed tensions in the international oil market well, thus containing the risks of an oil crisis.

Host Nation Support

7.6 The coalition secured important logistical and basing assistance in the build-up to the conflict from a wide range of countries, not only traditional allies. Nonetheless, the operation demonstrated that obtaining basing rights and other support from nations near the area of operations cannot be taken for granted. This risk can be mitigated by the adoption of a range of measures including access to bases elsewhere, the possession of longer range, high-endurance platforms, and the use of capabilities that enable strategic access at a time and place of our choice. In this context, the UK Maritime Contingent's support to operations ashore in Iraq demonstrated the advantage of being able to provide support from the sea in addition to that provided from land bases and host nations. However, this is unlikely to provide more than a partial solution, and the UK will need to continue to cultivate existing and potential partners in areas of possible crisis in order to ensure theatre access, taking into account possible competition from coalition partners.



A Tornado GR4 refuels from a KC-10 tanker of the US Air Force

Interoperability

7.7 It is probable that any future UK medium- or large-scale war-fighting operation will be fought in a US-led or -backed coalition. Working with the US in a coalition brings political, diplomatic and military advantages, including the aggregation of capabilities, flexible war-fighting options and the sharing of intelligence and risk. UK forces need to be commanded, structured, equipped and trained with this in mind. Although the UK cannot afford to match US capability on a pro rata basis, it should be possible to achieve congruence by optimising key existing and emerging



A UK desert camp

capabilities. UK forces' ability to work alongside US forces was fully tested in Iraq and many of the ensuing lessons concern interoperability issues, particularly communications. However, the first step towards interoperability is to ensure doctrine is coherent and relevant to US-led operations. For example, the ease with which 1(UK) Armoured Division integrated with the US 1st Marine Expeditionary Force was helped by similar doctrine, and the Royal Air Force's (RAF) ability to integrate seamlessly with the US Air Force reflected 12 years of operating together in the no-fly zones over Iraq.

7.8 The overwhelming success of 'rapid, decisive operations' can be characterised by the combination of effects-based warfare and network centric warfare – a system of war-fighting that provides the best tools for the job, in the shortest time and with the greatest effect. The use of fast-moving, heavy effect forces, utilising 'smart technology', near real-time day and night shared situational awareness and network solutions, linked to on-station or long range air power, was validated in Iraq. The US ability to combine land and air operations and support them from the sea and from friendly bases at very high tempo enabled the mix and impact of joint assets to be adjusted to operational need or the unexpected, across the whole theatre of operations. The characteristics of speed, simultaneity, multiple choice of effects and precision seem to offer solutions to situations in which time is of the essence in achieving operational objectives by the use of force, and where the ability to influence rapidly the perception, will and behaviour of an opponent may be critical. This wide choice, effects-based approach is likely to dominate US doctrinal development and will require potential partners to adjust their force structures if they are to maintain congruence and contact with an accelerating US technological and doctrinal pre-eminence.

UK/US Operational and Training Experience

7.9 The planning and conduct of the Iraq operation was facilitated by the close professional relationship that has developed between the US and UK, not only as leading

members of NATO, but also through numerous bilateral and institutional contacts, and the benefits of training and operating together over many years. Some UK personnel deployed on the operation had trained regularly with the US and had developed a thorough understanding of US military culture and ethos, as well as their equipment, training and doctrine. This understanding partly offset the differences between UK and US military cultures and equipment.

Combat Identification

7.10 Combat ID enables military forces to distinguish friend from foe during operations, enhancing combat effectiveness while minimising the risk of accidental engagement of friendly or allied forces, otherwise known as fratricide or 'Blue-on-Blue' incidents. The range of measures taken to provide protection for operations in the Gulf was described in *First Reflections*.² Regrettably a number of fratricide incidents occurred which are under investigation. Experience in this and previous campaigns and the prospect of future operations of increasing pace, intensity and complexity indicate that efforts cannot be relaxed in this key area. MOD policy on Combat ID emphasises that minimising the risk of fratricide requires a combination of improved tactics, techniques and procedures, enhanced situational awareness and target identification devices. While our aim is to provide UK forces with as effective a Combat ID system as possible, regrettably no system is 100-percent failsafe, no matter how sophisticated the technology. Moreover, solutions must be interoperable with likely allies.

Notes:

¹ *First Reflections*: Page 32 para 6.2

² *Ibid*; page 25, para 4.15

Editor's Note: Reprinted from United Kingdom Ministry of Defence report, *Lessons for the Future*, Chapter 7 "Working in a Coalition," December 2003, pages 34-37.

The ABCA Armies' Program and Coalition Lessons

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THE ABCA ARMIES' PROGRAM

Introduction

The ABCA Armies' Program ("Program") takes its name from the first letter of each of its member Armies: America, Britain, Canada, and Australia. The Armies of these four nations and the Program's associate member, New Zealand (NZ), have fought alongside and in support of each other for well over a century. World War II provided the impetus for these traditional allies to strive for maximum interoperability on the battlefield, whilst acknowledging national prerogatives for organization, equipment, doctrine, etc. The ABCA is not an alliance, nor is it a standing coalition. Instead, it is a 'five eyes' standardization organization that focuses on the operational and tactical levels of the land environment, whilst cognizant that this all takes place within a joint and ever evolving battlespace.

ABCA Mission: The ABCA Program is to optimize interoperability through cooperation and collaboration in the continuous pursuit of standardization and mutual understanding in order to integrate capabilities of the ABCA Armies in coalition operations.

Coalition Interoperability

The Program optimizes doctrinal, technical, and materiel interoperability between coalition Armies through the exchange of information, and by the production of a range of ABCA products which are either incorporated into national doctrine or used to provide a common understanding when building and operating as a coalition. The bulk of the Program's products are ABCA Standards (or Quadrapartite Standing Agreements [QSTAG]), although the Program has produced a range of handbooks such as the Coalition Operations Handbook,¹ which act as a guide for coalition commanders and their staffs.

Interoperability. The ability of systems, units, or forces to provide services to and accept services from other systems, units, or forces and to use the services so exchanged to enable them to operate effectively together. (NATO AAP-6)

Lessons and Challenges

The methods employed, and the capability for collecting lessons, vary considerably between the Armies. The collection and exchange of *coalition* lessons between ABCA Armies has posed significant challenges for the Program. These have included:

- Collection efforts by nations have focused primarily on Service and national lessons, rather than on identifying coalition ones.
- Issues of security classification and releasability of lessons material, compounded by limited means to exchange lessons above 'UNCLAS FOUO' [unclassified - for official use only].
- National sensitivity to 'exposing' coalition issues.
- Over-reliance by the Program on 'passive' lessons collection methods.
- Coalition lessons unintentionally 'hidden' within significantly larger general lessons documents or post operations reports.
- Limited ability within the Program to collate and analyze lessons, and then communicate them to the appropriate elements of the Program. (Essentially, lack of an established process.)

The Program has made significant progress in overcoming these challenges in the past eighteen months. Using the Program's Interoperability Objectives as a guide, and latterly by creating a lessons critical topics list (LCTL), the Program has generated a range of recent coalition lessons from operations by ABCA Armies in the Global War on Terror (GWOT).

The Role of Lessons in Supporting the Program

In order to assist in gauging the extent to which ABCA Armies are interoperable, the Program analyzes lessons



New Zealand Army engineers build a temporary bridge in Iraq (Photo from the New Zealand Defence Force)

from real-world operations being undertaken by member Armies, as well as from any exercises, experiments, or other relevant multinational activities in which the Armies may be participating. The Program has no permanent lessons organization, and is therefore reliant on member Armies sharing relevant lessons that they collect. Members Armies have each appointed an ABCA Lessons national point of contact (NPOC) as a single focal point to facilitate the sharing of lessons. Each of them acts as a link between their national lessons organizations and the various elements of the ABCA Program.

The interoperability focus within the ABCA is in the domains of **D**octrine (not limited to doctrine, but including standard operating procedures (SOP) and tactics, techniques, and procedures (TTP)), **E**quipment (compatibility), and **P**ractice, rather than the full range of DOTML-PF² or POSTED³ considerations that member nations and Services might apply when analyzing and ‘learning’ the national lessons they have developed. Interoperability gaps identified result, eventually, in ABCA products, which mitigate those gaps. The mechanism for this to occur is for lessons themes to be produced in the Fall for the Program’s Executive Council and Board of Directors;⁴ and these influence the strategic guidance developed and the interoperability objectives established for the Program to achieve in the following year. Lessons provide only one of the inputs into the process of providing strategic guidance and developing the interoperability objectives.

The work of analyzing the interoperability gaps, determining the best solutions, and then forming the project teams to actually deliver the ABCA product falls to the Program’s Capability Groups. The Program has

five capability groups: Command, Sense, Act, Shield, and Sustain. Each of these groups contains battlefield operating systems subject matter experts (SME) from the nations. Capability groups utilize the observations from which the lessons were derived as one of the inputs into their analysis of interoperability gaps. This analysis leads to a determination of the optimum product to close or mitigate the gap. The capability groups are supported by three support groups: Science and Technology Support Group, Futures Support Group, and Exercises and Experimentation Support Group. Lessons NPOCs reside within the Exercises and Experiments Support Group, thereby ensuring that targeting and collection plans are linked to opportunities to gather lessons.

The methods used by the ABCA to overcome the challenges and get lessons into the Program in a timely manner have included a lessons workshop, a physical exchange of lessons by NPOCs, and the deployment of an officer to Iraq and Afghanistan to specifically collect coalition lessons on behalf of ABCA.

COALITION LESSONS

ABCA Lessons Workshop

An ABCA Lessons Workshop was approved by the National Directors at their April 2004 board meeting, with the aim of *validating and developing key lessons and themes derived from Operation IRAQI FREEDOM (OIF), Operation ENDURING FREEDOM (OEF), and the GWOT into identifiable issues that could assist ABCA capability groups conduct interoperability gap analysis during the July 2004 annual meeting*. Twenty-five delegates assembled at Fort Leavenworth from 15 -16 June 2004 to produce the product. Delegates comprised a mix of national lessons staffs, SMEs, and ‘warfighters’; the latter group targeted specifically because of their first hand recent experience from coalition operations in OIF or OEF, and who could address the five focus areas established for the workshop. Delegates included the Commander of NZ’s Provincial Reconstruction Team (PRT) in Afghanistan, the Commander of a United Kingdom (UK) battle group that served in Iraq, and special operations forces (SOF) officers from Australia with OIF experience.

The workshop developed a range of issues in the areas of: SOF-conventional force integration, battlespace awareness, networked fires, force protection, counter-insurgency operations, operational maneuver, battle



**An Australian cavalry trooper and a US soldier in Iraq
(Photo from the Australian Defence Force)**

command, and stability operations. Issues were recorded in language that rendered them UNCLAS-FOUO and thus they were easily shared outside the workshop. Common themes across the five focus area workshops were the effects of the non-contiguous battlefield, situational awareness (common operational picture), coalition information sharing, and the need for combined and joint training. The workshop also highlighted, unexpectedly, issues in the employment of close air support by coalition partners.

The output of the workshop—a series of slides that listed issues, context, and, in some cases, recommended solutions—was delivered to capability groups at Annual Meeting 04.

Lessons Exchange

As a means of focusing lessons collection by the armies, NPOCs at Annual Meeting 04 in July, decided to construct an ABCA LCTL. The list was developed by each Army submitting its top lessons targets, which were fused and then cross-walked with the 2004 interoperability objectives. Whilst not in a priority order, the topics on the list were:

- Command
- Battlefield awareness
- Force protection
- Operational maneuver on the non-linear battlefield
- Joint networked fires

- Intelligence exchange

Each broad topic had sub-categories developed for it. Command, for example, included command relationships, use of liaison officers, (use of) national capabilities and planning, fratricide, rules of engagement, and passage of information.

ABCA capability groups were not consulted in the initial build of the LCTL; however, their input was included when the list was refreshed at Annual Meeting 05. The list now provides a guide to the lessons NPOCs and national lessons organizations of those areas, by capability group rather than by issue, that the ABCA is most interested in gathering coalition lessons from, and which of the capability groups is the intended recipient of that information. The LCTL is not meant to be exclusive either; the Program will take any and all coalition lessons.

Nations have produced a significant number of reports, although release and exchange of them has been problematic. To increase the range of lessons available to the capability groups, and also as a method of lessons exchange between the Armies, NPOCs were requested to hand carry relevant reports from recent operations to the Annual Meeting 05. These were added to 23 coalition-relevant UNCLAS FOUO reports that the U.S. Center for Army Lessons Learned (CALL) provided in response to requests for information submitted earlier by the author. In all, 41 documents were exchanged and put before the capability groups.

In hindsight, it would have been better to get information to the capability groups well in advance of the annual meeting, and also if possible, to have extracted all the lessons into a single report and tagged them to likely recipients rather than have the SMEs trawl through each of the documents to find them. Nevertheless, the information was instructive and included many relevant lessons beyond the scope of the LCTL. A small sample of the coalition themes identified in the reports that were exchanged included:

- Coalition airspace coordination.
- Intelligence, Surveillance, Target Acquisition, and Reconnaissance asset coordination.
- Use (and utility) of coalition liaison officers and/or embedded staff within a lead nation headquarters.

- Intelligence sharing between coalition partners.
- Common operational picture (COP) within a coalition.
- The effect that not having an memorandum of understanding (MOU) had on limiting access to host nation and lead nation services and resources.
- Rear area security and the self-protection requirement of logistic units.
- Battlespace management (including airspace).
- Use by UK elements of 'killbox' methodology and USMC Air and Naval Gunfire Liaison Company (ANGLICO) to coordinate US close air support.
- Force protection in a coalition setting.

Active Lessons Collection⁵

As a means of securing the most recent coalition lessons for use by capability groups at Annual Meeting 05, the US Army presented the Program an opportunity to attach a dedicated ABCA collector to a US Army–US Air Force Combined Arms Collection Team (CAAT) being deployed to Iraq and Afghanistan in Spring 2005. COL Murray-Playfair, UK Liaison Officer to the Combined Arms Center, Fort Leavenworth, deployed with the CAAT. His collection plan, prepared at the CALL, Fort Leavenworth, during the CAAT's work up period, was based upon the ABCA 2004 LCTL and its associated sub-categories. Projected CAAT deployment and recovery dates were scheduled close to the annual meeting, so COL Murray-Playfair undertook to deliver an unclassified initial

impressions report to the Program immediately upon his return so that the capability groups would have information for their deliberations.

COL Murray-Playfair's deployment occurred 11 Mar – 1 Apr 05. His itinerary included visits to Multinational Forces – Iraq (MNF-I), Multinational Coalition – Iraq (MNC-I), Multinational Division (Southeast) (MND(SE)), Combined Forces Command – Afghanistan (CFC-A), Combined Joint Task Force (CJTF) 76, Office of Military Cooperation – Afghanistan (OMC-A), Iraqi Security Assistance Force Headquarters (ISAF HQ), NZ PRT, US led PRT, and British Forces (BRITFOR) Kabul. He also was able to interview a number of UK, Canadian (CA), Australian (AS), and NZ commanders. The aim of COL Murray-Playfair's deployment was to *report insights and lessons on coalition interoperability from OIF and OEF, against the LCTL, in order to inform gap analysis by ABCA Capability Groups 11- 15 Apr 05 (Annual Meeting 05).*

Key recommendations from his deployment included:

- The Program to note the continued requirement for conducting kinetic operations, but with an increased emphasis on information operations, intelligence gathering, and soft effects such as building indigenous security capacity and the activities of provincial reconstruction teams, security sector reform (SSR), and disarmament, demobilization, and reintegration (DDR).
- The proven utility of embedding commanders and staff within key coalition headquarters (*noting the ABCA 'practice' is based upon a Lead Nation concept utilizing embedded coalition representatives and liaison officers, rather than upon multinational headquarters*).
- That progress in command, control, communications, computers, intelligence, surveillance, and reconnaissance (C4ISR) interoperability offers the highest payoff for ABCA; enabling a better COP, greater situational awareness between coalition members, and improved intelligence, surveillance, and reconnaissance (ISR).
- That additional work could be undertaken to improve upon anti-fratricide initiatives already introduced into the counter-insurgency campaign.



A Canadian patrol prepares to leave Camp Julien in Kabul, Afghanistan (Photo from the Department of National Defence, Canada)

- The need to continue work to improve understanding between conventional and Special Forces.
- The need to develop a common force protection framework between ABCA Armies.
- The need to build on national initiatives to build a common understanding of the planning and conduct of counterinsurgency operations.
- The need to develop open architecture intelligence databases, with the ability to conduct pattern analysis, rather than be limited to data retrieval.
- The need for the Armies to have a common understanding of their various battle procedures.
- The need to acknowledge the requirement for coordinating mechanisms, such as targeting and effects assessment, as key coalition campaign enablers.

Copies of the report were provided to the capability groups and were used in their analysis of interoperability gaps. A number of the approved tasks can be directly attributed to the report, such as:

- Developing generic structures and procedures within a coalition intelligence organization.
- Providing a framework for coalition Geospatial Enterprise Services (GES) and exploring options for 'open' interfaces and services between coalition (national) GES.
- Including SSR and DRR within ongoing ABCA work on stability operations.
- Updating coalition force protection measures.
- Providing guidance on logistics planning and command and control (C2) for coalition operations.

COL Murray-Playfair's report is the most coalition-focused product the Program has received and is a strong indicator that dedicated ABCA collection within national lessons collection deployments (to operations or exercises) provides a huge return on investment. The Program will continue to look for similar opportunities.

CONCLUSION

The relatively short turnaround from lesson to product—twelve to eighteen months—means the Program is being both relevant and responsive. The ABCA cannot attack all issues identified—some are joint issues; some are

strategic and national—it focuses on operational issues within the doctrine, equipment, and practice domains, and the identification of interoperability gaps.

The ABCA Armies' Program has made a conscious effort over the past eighteen months to identify *coalition* lessons and to turn those into work for its project teams, ultimately to result in a range of products that will reduce interoperability gaps. The production of a LCTL, and the use of a range of collection means, has resulted in good product.

At Annual Meeting 2005, the National Directors approved a further coalition lessons workshop. The workshop's results will be used by the National Directors in November 2005 to shape next year's interoperability objectives and to inform the capability groups at Annual Meeting 2006.

About the Author:

Lt Col Wood is a New Zealand Army officer on assignment to the ABCA Program Office in Rosslyn, VA, where he holds the appointment of Staff Officer Coalition Operations. As an infantry officer, Lt Col Wood has held all command appointments up to battalion level, including command of NZ Battalion 4 in East Timor in 2001. His Program Office responsibilities include facilitating the collection, sharing, and use of coalition lessons between the member Armies and within the ABCA Program.

Endnotes:

¹Other ABCA Handbooks include: Coalition Logistics Handbook, Coalition Health Interoperability Handbook, Coalition Airspace Control Manual, Electronic Warfare Equipment and Organization Handbook, Communications and Information Systems Planning Guide, Coalition Intelligence Handbook, and the Coalition Engineers Handbook. The program has a Coalition Battlespace Management Handbook under production.

²Doctrine, Organization, Training, Materiel, and Logistics—Personnel and Facilities

³Personnel, Organization, Support and Facilities, Training, Equipment, and Doctrine

⁴Executive Council: Executive level advisors of the Program, who issue Strategic Guidance. The Council consists of the Vice-Chiefs of the ABCA Armies. National Directors: 1* representatives from the Armies who turn the Council's strategic guidance into Interoperability Objectives for the year and who sanction the Project Teams and interoperability solutions (in the form of ABCA Products) that the teams deliver, in accordance with the Directors' and the Executive Council's priorities.

⁵For this section of the article, I am indebted to COL Murray-Playfair, for the extensive use of his report of 6 April 2005, including his Executive Summary and lists of Key Insights.

Operational Evaluation of the Middle East Area of Operations

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ABSTRACT

The Australian Army has contributed to the Global War on Terror since late 2001. The Australian commitments to Afghanistan and Iraq were Operations SLIPPER, BASTILLE, FALCONER, and now CATALYST. Upon direction from the Chief of Army, LTGEN Peter Leahy, the Centre for Army Lessons (CAL) conducted research into these operations within the designated Middle East Area of Operations (MEAO). The resulting report discusses findings including, but not limited to:

- a. impact of intelligence, surveillance and reconnaissance systems within the battlespace on command and control;
- b. relative effectiveness of close air support (CAIRS) and ground-based fire support;
- c. rear area security operations;
- d. relative effectiveness of communications and information systems;
- e. urban operations; and
- f. the employment of armed helicopters.

This paper describes the findings made by the CAL; drawing upon reports and analysis from the United States and some Australian source materials. CAL's qualitative research was limited to address specific topic areas. Formal lessons were not drawn from this research, as the intent was to initially identify issues from the coalition experience and deliver these findings to capability sponsors for discussion and validation of their applicability for the Australian Army.

1. Introduction

CAL is the Australian Army's lessons agency. Its mission is to collect, analyse, store, and disseminate Army lessons in order to enhance war fighting

capability. In more generic terms, CAL's goal is to assist Army to learn from the lessons identified through activities such as operations and training. It is integral to Army's advancement as a learning organisation.

In May 2003, CAL commenced an operational evaluation on the Middle East Area of Operations as requested by Army Headquarters. The focus of CAL's evaluation has been to gather information and identify the most relevant issues, based on coalition experience, to inform the Australian Army's capability development.

An initial report was submitted on 6 June 2003 and the final report on 6 July 2003. Even though the formal task was complete on delivery of the second report, CAL research continues. The next step is to assist the Army to learn from the findings by informing force development activities, training, and planning at relevant levels.

1.1 Scope

Some CAL findings are not addressed in this paper because the Australian Army contribution to the MEAO centred on Special Forces capabilities and the Australian content evaluated by CAL is classified. Findings from the CAL review of United States (US) and other coalition material is contained in this paper.

2. Analysis Methodology

2.1 Focus Areas

The original analysis conducted for Army Headquarters was based on a series of questions and topics of particular interest to Army across the spectrum of operations. This paper has been structured according to the focus topics as follows:

- a. Network Centric Warfare (NCW);
- b. effects of intelligence, surveillance, and reconnaissance (ISR) and communication information system (CIS) assets on command and control (C2);
- c. urban operations;
- d. armed helicopter operations;
- e. fire support and close air support;
- f. rear area security; and
- g. training.

Broader topics are being considered as part of ongoing CAL research.

2.2 Methodology

A qualitative approach to research was adopted whereby source material was examined for recurring themes, or threads, and for elements that informed specified topics. Source material was drawn from official and recognised credible sources. Discrete blocks of material (observations) were drawn from sources, categorised against identified threads and sub-threads according to the focus areas, and then tabulated for further analysis. Observations that held significance in multiple focus areas were linked to each relevant focus area. Once organised by threads, the observations were grouped into their categories, issues identified, and findings derived. The majority of findings were drawn only where there were multiple observations that supported the finding. In a limited number of cases, a finding was drawn from a single observation. This was done where the analysis team identified that the observation held strong significance in isolation.

3. Major Findings

3.1 Command, Control, Communications, Computers, Intelligence, Surveillance, Reconnaissance and Electronic Warfare - Network Centric Warfare

Operations in Afghanistan and Iraq represent the latest experience in the application of NCW. In the context of this paper, NCW is defined as the networking of military command, sensor and engagement systems to gain advanced situational awareness and therefore enable a warfighting advantage. Consideration of the human dimension of NCW is also included.

Effective ISR is one of the essential components of NCW. It was found that ISR assets deployed on operations were generally able to provide continuous surveillance within the battlespace. ISR communication and information systems delivered improved data feeds from ISR elements to force decision-makers. Understandably, there were beneficial effects in having access to ISR systems but there was also a range of problems identified. Careful consideration must be given to the way information is handled and acted on by staff. Systems require further development and integration to handle and process the full spectrum of information.

US forces identified that NCW was complicated by the inability of many component systems to communicate with one another. In Iraq, communication was further complicated when units manoeuvred beyond the range of their radio communications, forcing more voice traffic through satellite means and inhibiting data flow. The breadth of ISR assets employed produced a significant volume of information that, at times, proved difficult to manage, comprehend, and utilise. At such times, the staff's knowledge of the situation, capabilities and the NCW systems can drive success. Difficulties in Afghanistan indicated that the components of NCW, in particular the supporting CIS, need to be flexible, interoperable, and adaptable to a wide range of conflict types and command configurations.

3.1.1 Communication and Information Systems Influences

The US Army experienced difficulty in the use of CIS based systems to achieve situational awareness and greater operational capabilities. The root of the problem lay in the disparate nature of the information systems used to generate the common operating picture (COP). In a number of cases, legacy systems designed to support particular battlespace operating systems or tasks were unable to share information. This stemmed from issues such as data structure and cross operating system compatibility between MS-DOS, Windows, Linux, and UNIX.

To overcome these difficulties, there was often a requirement to transfer information between these individual systems to generate common situational awareness. In many cases, this data transfer was done manually which consumed staff and created delays in information processing.

3.1.2 Information Flow

The proliferation of battlespace sensors exacerbated the problems of system incompatibility. As previously stated, the large volume of information required to be transferred to generate the COP increased the pressure on CIS. This was particularly due to the number of individual systems and the requirement to manually transfer information. One common result was that information would be repeatedly summarised into presentations in order to get the information to the commander on time. This was seen to degrade the quality of information available to commanders for decision-making.

More flexibility is required to target and tailor information within a headquarters. Sources commented on information inundation at all levels of command, indicating that important decision-making information could be more prominently displayed for the intended audience. It was also found that the volume of information inundated smaller intelligence cells to the point where not all information could be processed into intelligence.

While new ISR systems allow much information to be collected, supporting systems must be capable of sharing it and assisting battle staff to optimise its value. CIS capable of handling the entire range of information processing inputs could greatly aid in developing a COP and better informing command decisions.

3.1.3 Subsidiary Effects of Centralised Command Systems

It was found that, if centralised command systems failed or proved cumbersome, personnel devised means to work around and/or circumvent them. A subsequent issue was that, upon recovery of the failed systems, the manual updating of information was required to regain the effectiveness of the system. Each time, staff may be drawn into an update task that is not routine, therefore reducing effectiveness. Failed systems adversely affect the COP and situational awareness by providing incomplete information to commanders and staff, or by forcing situational awareness to be maintained using less automated methods.

The use of communications methods like e-mail as an alternative to command support systems can have a negative impact on the effectiveness of command. The decisions and discussions facilitated by casual e-mail may not be captured within situational awareness systems and can cause or contribute to confusion if use is not managed in context.

3.1.4 Communications, Command, and Distance

The large distances over which the campaigns were fought made command and control difficult. A Marine Corps report noted the pace of the operation often precluded the submission of detailed operation orders, rehearsals and back-briefs. Orders from higher headquarters and subsequent back-briefs were conducted by radio, which resulted in an increased reliance on radio communications.

It has already been stated that units often manoeuvred beyond effective tactical radio communications range. In these circumstances, units were forced to rely on single-channel TACSAT, INMARSAT and Iridium phones to maintain command and control. CIS that were dependent on very high frequency (VHF) or ultra high frequency (UHF) proved to be unusable for data where the range between points exceeded the range of the network. Satellite bandwidth was found to be inadequate to efficiently handle all data when including all command and control communications.

Limitations were identified for the Marine Corps Mounted Digital Automated Communications Terminal due to its line-of-sight reliance and highly technical nature. Limitations were also identified for the US Army XXI Battle Command Battalion/Brigade system due to its small digital capacity, graphic user interface, and non-windows based operating system. However, positive findings overwhelmingly identified the importance of these command and control systems and the requirement for reliable digital communications architecture to conduct command and control in today's battlespace. It was found that more bandwidth, particularly for satellite communications, should be made available for command and control systems. Operational experiences indicate that careful management and allocation of bandwidth across the theatre is of growing significance for operational planning and execution.

3.1.5 Small Mobile Command Posts

Elements of US forces deployed smaller command posts in the MEAO. For example, a US infantry division deployed an assault command post with a separate security and communications capability to provide greater mobility to the commander. That division's key observation is that these smaller command posts were effective for their manoeuvre unit commanders due to the XXI Battle Command Battalion/Brigade system, Blue Force Tracker, TACSAT and Iridium phone links, which greatly enhanced command and control on the move. Units other than combat elements, however, struggled with mobile command and control because their communications platforms were less capable. The observation was made that "all future development on the command and control arena must be focused on a mobile structure with long haul communications for voice and data." The division's report recommends that these smaller mobile command posts be incorporated into US Army doctrine at division

and brigade level command and control models. The division also recommended that any command support systems be employable over extended distances and that multiple nodes be deployed within the battlespace to support this model.

3.1.6 Position Reporting Systems

Automated position reporting systems were employed by US forces within the Iraq conflict. These reporting systems were highly beneficial for the prevention of fratricide. They also relieved subordinate commanders of the need to continually report position and activities. Both the US Army and those Marine Corps units fielded with the Blue Force Tracker system commented positively on its capacity to provide a blue force COP. Currently this system is enabled using insecure satellite data communications. Not all units were issued with or tracking using position reporting systems, which made the quality of automated situational awareness systems vary and risk of fratricide shift proportionately. In some cases, coalition partners were partially fielded, but it was not universal.

So how are threat forces tracked? ISR elements are responsible for reporting threat information but earlier discussion described the incompatibility issues between information systems and the manual transfer to overcome the shortfall, as well as problems with processing large volumes of information. One source report stated that while local friendly position reporting was updated frequently, threat disposition updates, sourced from ISR, were far less frequent.

3.1.7 Text Messaging

The offshoot capability of the Blue Force Tracker, instant text messaging, was very well received by US forces. Instant text messaging became a communications means when voice communications were unreliable. Demand for increased instant messaging capabilities was universally observed across all related sources.

3.2 Effect of Intelligence, Surveillance, and Reconnaissance on the Battlespace

The information age is certainly impacting on armies around the world. The capability now exists for almost continuous surveillance of the areas that are of direct interest to a formation, made possible by the deployment

of unmanned aerial vehicles (UAV) such as Predator and the employment of satellite imagery. UAVs and satellite ISR were heavily employed to allow coalition forces to provide information on enemy dispositions. This capability offered immediate awareness of the battlespace to any headquarters with access to this information.

3.2.1 ISR: Control of Assets and Distribution of Outputs

Findings indicated that US Army UAV-based ISR was commanded and controlled at Corps level. Satellite support was also controlled at this level and higher. Given this level of control, these assets usually focused on the needs of the higher levels of the force. Lower formation needs were reported to be met only if they were closely aligned with those of higher formation needs. Information terminals were available at lower headquarters to download imagery but often did not provide effective service. This problem was directly related to voice communications through digital systems saturating bandwidth. As a result, Corps often had a greater awareness of enemy positions within areas of immediate interest than did units at the forward line of own troops. Tactical commanders did not often have the most current situational information.

The US Marine Corps utilised their UAV, for example *Dragon Eye*, at battalion level. Having a tactical intelligence collection platform at this level reduced the reliance on external intelligence organisations and elevated tactical situational awareness for units.

Despite the proliferation of ISR systems in the battlespace, it was found that specific information needs, and thus the tasking of the assets, needed to be focussed to provide detailed intelligence. It was also found that tactical commanders did not always have access to airborne ISR assets for tasking, or the collected information that assets such as satellites and UAV provided.

3.2.2 Effect of New Information Paths on Targeting

High visibility of targets often prompted Corps to authorise air strikes against enemy forces forward of lower formations. This was often done without the knowledge of the local commander. This should be considered in context with two important factors: the risk of fratricide, and the effect on the local

commander's scheme of manoeuvre. Section 3.2.1 describes how, according to sources, the situation arose. Army should consider the experiences of coalition partners in formulating doctrine, tasking, priorities, and procedures as part of the introduction into service of UAV and other sensors.

3.2.3 Position Reporting

Automated position reporting equipment was not uniformly deployed and situational awareness of enemy and friendly dispositions was often incomplete. Visibility of friendly forces at higher headquarters often depended on reporting from subordinate forces and information received from the use of tracking systems such as Blue Force Tracker. Despite this tracking system, the possibility that friendly forces could be targeted by friendly assets remained. Tactical headquarters generally had sound awareness of their force dispositions and were in a good position to coordinate local air strike targeting. When CAIRS was planned or initiated by corps headquarters without consultation with commanders near the target area, it had the potential to undermine tactical plans for shaping the enemy and increased the risk of fratricide.

3.2.4 Difficulties in Handling Intelligence

Fundamental issues regarding intelligence were noted by at least one US Marine division. Timely intelligence processing was challenged by communications difficulties. Delivering information from division to battalion level was problematic. Bandwidth issues were part of this problem but sources stated that the layered filtering of requests for ISR collection assets stifled efficient asset tasking and obtaining products from them. Additionally, the intelligence CIS was difficult to operate and insufficiently transparent to allow timely monitoring of the status of information collection requests. The US Marine division recommendation was to streamline system architecture. CIS systems should be made transparent and provide automatic feedback regarding information collection requests. Finally, tasking of collection assets such as UAV needs to be shared with unit-level manoeuvre elements so that distribution of outputs can be optimised.

3.2.5 Intelligence, Surveillance and Reconnaissance Reading Enemy Intent

US Marine Corps sources stated that increased technical ISR of enemy provided a high resolution of

enemy equipment dispositions. ISR also provided almost immediate warning of electronic systems being engaged and of artillery fires. However, there was an observation that coalition human intelligence on Iraqi military leadership and the possible courses of action open to these adversaries was of limited effectiveness. The Marine division report indicated that intelligence skills training could include the ability to make better assessments about foreign military leadership to increase human intelligence effectiveness.

3.3 Urban Operations

Military operations in urban terrain (MOUT) were conducted many times in the MEAO. The Iraqis sought to use population centres as a place to engage and delay coalition forces. Coalition forces deployed combined arms teams into urban terrain with various mixes in various situations. While research continues in this focus area across the coalition, there are some findings to convey.

3.3.1 Armour in the Urban Environment

Overall, armoured vehicles were regarded as being a key contributor to the success of the Iraq campaign due to the protection, mobility, and firepower they provided. At the commencement of the Iraq conflict, there was little doctrine for the use of tanks in predominantly urban environments. The integration of tanks into urban combat was refined through practice and is informing further doctrine development.

3.3.2 Use of Tanks in Military Operations in Urban Terrain

The US Army reported very favourably on the use of armour in MOUT where the M1A1 Abrams tank was successfully employed. The frontal armour of the M1 offered near invulnerable frontal protection against threat weapon systems, while a Marine Corps source noted that M1A1 fire systems provided precise, accurate, and high-volume suppressive and destructive fires.

Tanks were able to provide heavy direct fire to support the urban advance. Armour predominantly used high explosive anti-tank (HEAT) and multi-purpose anti-tank (MPAT) rounds in the urban environment to open entry points in walls and other structures. It also provided partial cover to troops on foot. This is a well-

documented use for armour in urban settings dating back to World War Two.

3.3.3 Infantry Fighting Vehicles

Infantry fighting vehicles (Bradley/Warrior) were also successfully employed in the urban environment. They offered protection to forces on foot and the ability to apply direct fire in response to the needs of the infantry. The ability to manoeuvre, short barrel length and high barrel elevation facilitated a large engagement envelope. The requirement for crew commanders to ride high in the turret to gain situational awareness was a disadvantage with recommendations being made for a cupola to overcome this shortfall.

3.3.4 Fire Support

The use of CAIRS, artillery, and mortar fire support was employed in the urban environment, but had constraints applied due to concerns about collateral damage. This influenced the ammunition mix and the type of fire employment. Artillery used converged (sheafed) fire to contain damage and close fire was characteristic of artillery employment in MOUT. Variable time artillery rounds were used to produce airburst detonations and kill enemy soldiers on building roofs. CAIRS employed precision guided munitions for precision strikes where avoiding collateral damage was a consideration in the choice of engagement means. Mortar base-plate layouts were amended to accommodate firing in the street, opting for linear layouts. Mortars were useful for the provision of high angle fire-to-fire over and among buildings. Other artillery, being sited outside of urban areas, generally could only achieve lower trajectory fires, precluding dropping rounds onto the tops of, or in between, buildings.

Indirect fire was an important adjunct to direct fire in MOUT. Direct fire would kill the enemy but these would be quickly replaced by reinforcements. US troops employed indirect fire to destroy the building thereby denying the enemy fighting position. Indirect fire could also be used selectively to contain collateral damage.

3.3.5 Helicopters in Urban Operations

AH64 Apache and OH58D helicopters were used to provide overwatch, forward target identification and fire in the urban environment. Helicopter vulnerability to ground fire in MOUT was high and the necessity for

helicopters to employ running fire and low/fast movement techniques within the urban environment was reinforced in this operation as was the need to work in a combined arms environment. The AH64 proved to be better employed in the outer areas of the urban environment where it could provide direct fire support to the advance using stand-off weapons and sensors, but remain safe from ground fire. The manoeuvrability and low-level speed of the OH58 provided its main form of protection from ground fire, while providing close air observation and intimate fire support in inner areas during the urban fight.

3.4 Helicopters

Both the US Army and Marines employed attack helicopters, these being the AH64 Apache and AH1W Super Cobra respectively.

3.4.1 Attack Helicopter

A key event in the employment of the AH64 was the attack on Karbarlah by the Apache Longbow helicopters of the 11th Attack Helicopter Regiment. The regiment incurred a high level of casualties from ground fire to the extent that its Apache Longbow capability was non-effective for several days while repairs were effected. In most cases, losses and/or damage to the airframes appeared to be related to the tactics for their employment rather than inherent shortfalls in aircraft or performance.

Route selection proved to be of vital importance. In early parts of the conflict routes overflew population centres and roads. This exposed the aircraft to small arms fire from the population. Later in the conflict, as experience grew, selected routes avoided overflight hazard areas, often flying over water to minimise exposure to hostile fire.

Exposed hovering to engage targets was another major cause of vulnerability of airframes to fire. In such cases, the aircraft presented itself as a static target able to be engaged by a wide range of systems, many of them of an unsophisticated nature, such as 12.7mm anti-aircraft machine guns or even rocket propelled grenades. Reporting for the AH1 indicated that running fire techniques were regularly employed and appeared to enhance protection to the airframe. No other major findings were derived relating to its MEAO operations.

3.4.2 Anti-Aircraft Artillery (AAA) Tactics

In several cases, Iraqi AAA commanders employed firetraps to draw attack helicopters into range of their own weapons systems. As an example, unserviceable tanks were placed in open view to be engaged by attack helicopters, which were in turn engaged by weaponry concealed. Another tactic was to fill trenches with oil and set them alight to provide thick black smoke. This smoke limited the ability of coalition pilots to observe target areas and afforded Iraqi forces more flexibility.

3.4.3 Helicopter Level of Protection and Integration as Part of a Combined Arms Team

Later coalition airmobile operations employed combined arms to support and protect both utility and attack helicopters. In these cases, CAIRS and artillery would provide suppressive and preparatory fire, coordinated to support the ingress and egress of the helicopters.

The value of fire and movement for helicopters was demonstrated by their employment in the urban environment. Exposure to small arms and rocket propelled grenade fire was high. OH58 Kiowa were employed in the inner city areas due to their agility and acceleration, making them suitable for low altitude work. Use of enlisted tactical air controllers in the OH58 increased responsiveness and flexibility of CAIRS. AH64 were employed in the outer reaches of the urban area, where its firepower could be maximised and lesser manoeuvrability offset by its stand-off.

3.5 Close Air Support and Fire Support

CAIRS and ground-based fire support are complementary capabilities, each with particular strengths. CAIRS was able to provide precision strike but could often be limited by weather conditions, aircraft availability, or proximity and positive identification of target considerations. Indirect fire support was quicker in response and available in any weather but carried higher collateral damage risk due to the requirement to adjust fire and the level of precision for most conventional munitions. Most findings in this section pertain to CAIRS since only limited observations were made of artillery in Afghanistan and Iraq. On balance, observations reinforced that fire support to the land force is best provided by a range of air and ground-based fire support assets, each utilising its own particular strengths.

3.5.1 Close Air Support and Fire Support Effectiveness Factors

Operations in Iraq and Afghanistan provided important data regarding the effectiveness of CAIRS and artillery-based fire support.

The availability of CAIRS hinged on the following factors:

- Availability of aircraft to perform CAIRS tasks, including proximity to target and response time.
- Rules of engagement, in particular the requirement for the pilot to positively identify the designated target and the process for granting clearance to fire.
- Weather influences, which govern the ability to positively identify the target, then (for aircraft) to acquire it on a weapon aiming system in order to engage it.
- The type of weaponry carried by the aircraft, ranging from Joint Direct Attack Munitions (JDAM), which can be aimed independently of pilot ability to visually acquire the target, to laser precision-guided munitions to unguided bombs.
- The ability to provide suppressive fire on enemy targets.

3.5.2 Close Air Support Response Times

In terms of time responsiveness, artillery fire support appeared to be the means through which quickest response was achieved. During operations in Iraq, CAIRS required the target to be positively identified before the pilot could engage it. Simple laser designation in its own right was insufficient. As a result, forward air controllers had to talk the pilot onto the target as a preliminary to engagement. The fastest response (call for CAIRS to weapons release) reported in one divisional after action report was five minutes. In this example, the pilot was already on station and had already identified the target prior to receiving the call for fire.

3.5.3 Air Liaison Officer/Brigade Air Liaison Officer Support

The air liaison officers and brigade air liaison officers were regarded as important contributors to the success

of CAIRS missions, working with ground fire support elements to coordinate fire. In both fixed wing operations, and as shown in the employment of OH58 (Marine Corps) in the urban environment, forward air controllers are also key personnel in the coordination of CAIRS.

3.5.4 Suppressive Fire

In most circumstances, no artillery was available to support operations in Afghanistan. CAIRS provided a limited suppressive fire capability. It was found, during the engagement of Taliban and Al Queda, that CAIRS was suitable for striking point targets but of limited effectiveness for providing suppressive fire. The limited suppressive fire provided by CAIRS sorties increased ground forces assault distances.

3.5.5 Weather

Weather had a significant effect on the ability of all air based means to engage the enemy and provide support to ground forces. Reduced visibility limited the ability of pilots to make positive identification of targets and use laser guided precision guided munitions. The effect of this was marked during sandstorm periods, where it is indicated that only JDAM and cluster munitions could be used.

3.6 Rear Area Security Operations

The speed of the coalition advance through Iraq stretched lines of communication for US forces. Tempo also caused some threat forces within the area of operations to be bypassed and expose rear echelon force elements to significant threats. Experiences reinforced the importance of all force elements being capable of providing integral protection. Experiences also reinforced the need to provide protection capable of overcoming the posed threat.

3.6.1 Protection of Rear Areas and Lines of Communication

Combat forces were frequently tasked to provide security for lines of communication and rear areas. Since combat forces were not always available it was found that rear area forces needed to be better prepared to provide organic security.

Documented proposed enhancements for rear area security included the introduction of enhanced fire power (for example, 40mm automatic grenade launchers) and limited armour to light vehicles within combat service support and other rear elements.

3.6.2 Combat Identification and Individual/Collective Skills

Fratricide was an issue in the rear area of the theatre. To mitigate risk in future operations, findings indicate that combat identification could be fielded to both combat and non-combat units. Where combat identification equipment does not exist, sound policy and procedures must be in place to ensure the risk of fratricide is mitigated. Operation Iraqi Freedom demonstrated the need for combat service support and combat support units to be better equipped and trained to provide organic force protection. This was particularly pertinent for convoys, which were, and still remain, vulnerable. Sources indicated that the non-contiguous battlespace experienced in Iraq reinforced a requirement for all-corps soldier skills – combat and field skills as well as individual weapons maintenance and marksmanship.

3.7 Training for War

US reporting credited realistic and comprehensive training as a major factor in the success of the campaign. Particular credit was given to collective training centres in the US, as well as comprehensive, realistic, and evaluated training in theatre.

3.7.1 Realistic Training

The US credited training at their Combat Training Centre and Joint Readiness Training Centre with providing a sound background for combat operations through the provision of realistic training. The value of realism in training, through the imposition of the wide range of combat conditions, was noted as a key factor in conducting successful combat operations. Simulated combat conditions could include fighting from enclosed armoured fighting vehicles, operating in full personal protective ensemble, sustaining and supporting casualties, experiencing simulated incoming artillery, or any of a host of others, controlled by the training centre. Reports also indicated that the Iraq theatre also proved

the opportunity for ongoing combined arms and joint training.

3.7.2 Military Operations in Urban Terrain Training

One US Marines battalion noted the importance of the training they received in the Urban Combined Arms Experiment. The scenarios and breadth of challenges provided to the troops, combined with the pace and duration of the exercise, provided the Marines with a sound training base to draw on during the Iraq operation. Their after action report commented on the requirements for urban training to prepare for the range of threats that were realised in Iraq, and the fact that urban environments contain varying building sizes, materials, and structures. Training facilities should include the complexity of the urban environment including civilian vehicles, non-combatants, furnished buildings, and other realistic features of significance.

3.7.3 Fidelity of Training for Fire Support

US Marines found their training on conducting deliberate fire planning, during their Combined Arms Exercise, did not correspond with practice in Iraq. Training focused on top down planning where combined aviation, artillery, and mortar fires were actually coordinated as low as sub-unit command post level on many occasions. The training environment presupposed a level of intelligence that could yield a high level of accuracy in pinpointing enemy targets. In reality, the US Marines battalion reported that generally manoeuvre elements found the enemy on contact. Essential fire support tasks and enemy targeting was issued by their battalion fire support coordinator, but the forward observers and forward air controllers coordinated situational targeting while on manoeuvring.

3.7.4 Individual Skills

As stated in Section 3.6.2, it was found that the all-corps competencies for weapons and combat skills need to be incorporated in all aspects of individual training. Further observations noted that combat service support and combat support elements must also be stretched in training exercises with a greater emphasis on assisting individuals to appreciate their role in that operation.

3.7.5 Communications Information Systems

Sources stated that, with the advent of more sophisticated digital CIS, equipping units immediately prior to deployment without proper introduction limits their capability to operate the equipment on operations. Without proper introduction, the capacity to maintain equipment is also limited.

4. Conclusion

The CAL was tasked to analyse coalition operations in Afghanistan and Iraq over the last two years in order to inform Army's development. This paper has presented findings that have been derived predominantly from US and some Australian experiences. These findings have potential significance for the Australian Army because the topics covered match development priorities and operational commitments. Several of the findings are linked by capability enablers such as major systems, training, or command and management.

CIS and ISR have been discussed in unison in this paper because timely ISR has a great dependence on CIS. Operational experiences have indicated that better ISR coordination can be achieved and that there are many pressures for command and control communications. The CIS systems offered options to force elements that challenge staff who attempt to maintain the common operating picture for commanders as well. The Australian Army already has related challenges with its Battlespace Command Support System (BCSS).

The Australian Army has continuing emphasis on the development of our urban operations capability. This paper has emphasized the importance of the combined arms team for success in the urban environment. Offensive support and the utility of helicopters on contemporary military operations have been discussed. Australia is still in the process of acquiring its new armed reconnaissance helicopter capability and the information contained in this paper is relevant to that capability. The wider offensive support, including CAIRS, has been discussed as well.

The importance of rear area security operations has been demonstrated during operations in Iraq. Convoy protection and the importance of maintaining the all arms skills, even when located in a rear area, are important

since the shape of the battlespace is changing with the diversity of operations. The experiences related in this paper reinforce that training at both the individual and collective level is paramount. It is also paramount to conduct training well before and during operations.

CAL is continuously analysing operations, training and other activities in order to identify the key learning points to offer back to Army. The goal is to help Army to improve through the experiences of its people. The learning process also involves organisations external to Army where they contribute to Army capability. CAL aims to engage these organisations as well by informing their delivery of products and services.

This paper has outlined several findings from recent coalition operations that have relevance to future operations and Army development initiatives. CAL intends to engage with capability sponsors to further validate and incorporate the findings into Army capability. Organisations seeking to incorporate experience into future planning can approach CAL for support. Improvements will be most effectively realised through collaboration.

Editor's Note: This article was originally printed for the *Land Warfare Conference 2003, Adelaide, Australia, October 2003*. Reprinted with permission.

References:

- [1] Abrams Tank Systems Lesson Learned Operation Iraqi Freedom 2003.
- [2] Afghanistan and the Future of Warfare: Implications for Army and Defense Policy, Stephen Biddle, November 2002.
- [3] After Action Narrative History of 5th Marines Regimental Task Force, 16th May 2003.
- [4] Australian Army Liaison Officer (AALO), LTCOL Wes Volant, United States Army Training and Doctrine Command (TRADOC) Monthly Report for May 2003.
- [5] Brief on USMC LAV and Options for ASLAV Developments by LTCOL Michael Krause Australian Army Liaison Officer (AALO), United States Marine Corps (USMC), 13 April 2003.
- [6] Briefing Notes 101st Infantry Division received from the United States Center for Army Lessons Learned (CALL), May 2003.
- [7] Center for Army Lessons Learned (CALL) Operation Iraqi Freedom, Emerging Observations, Insights and Lessons, 23 June 2003.
- [8] Digital Battle Command Baptism By Fire by Lieutenant Colonel John W. Charlton.
- [9] Field Report Marine Corps Systems Command Liaison Team Central Iraq, 20 April to 25 April 2003.
- [10] <http://www.strategypage.com/iraqafterthewar/iraqwarlessonslearned> 9-14 May 2003.
- [11] <http://www.strategypage.com/iraqafterthewar/iraqwarlessonslearned> 28 May 2003.
- [12] Land Warfare Studies Centre (LWSC) Report by Head LWSC (Dr M. Evans) on liaison visit to the United States, 5-14 April 2003.
- [13] Marine Light Attack Helicopter Squadron Operation Iraqi Freedom, The Urban Operations Journal, Mar-Apr 2003.
- [14] 101st Airborne Division Artillery (Air Assault) Memorandum for Commanding General 101st Airborne Division (Air Assault) Subject: Adapting While Fighting, Lessons Learned, and Tribute to Soldiers from Division Artillery, 29 April 2003.
- [15] Operation Iraqi Freedom After Action Review 1st Marine Division, 1st Marine Expeditionary Force (MEF) Lessons Learned.
- [16] Operation Iraqi Freedom PEO Soldier Lessons Learned LTC Jim Smith, 15 May 2003 (Draft).
- [17] UK Operation In Iraq First Reflections July 2003 released by Director General Corporate Communication.
- [18] United States Marine Corps Initial Observations on Operation Iraqi Freedom Component Commanders Conference, 14 July 2003.
- [19] 2nd Battalion 502nd Infantry Regiment 101st Airborne Division (Air Assault) Memorandum for Commander, 502nd Infantry Regiment Subject: Urban Movement to Contact Action Paper, 28 April 2003.
- [20] 3D Battalion 7th Marines After Action Review, United States Marine Corps and Lessons Learned from Operation Iraqi Freedom (OIF) 30 April 2003.
- [21] Third Infantry Division (Mechanized) Operation Iraqi Freedom After Action Report, 12 May 2003 (For Official Use Only).

A New Way to Wage Peace: US Support to Operation *Stabilise*

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As the United States grows increasingly weary of taking the lead in peace operations, it may prefer providing discrete support to ally-led coalitions. For a small, succinct, and inconspicuous mission, successful US support to the Australian-led Operation *Stabilise* could have a greater influence than its obscurity would otherwise indicate.

The island of Timor lies near the eastern end of the Malay Archipelago, roughly 350 miles north of Darwin, Australia. East Timor was a Portuguese colony for more than 400 years until the Portuguese dismantled their empire and abruptly left in mid-1975. Indonesia filled the vacuum, invading East Timor on 7 December 1975. Since then, the often-bloody and internationally ignored campaign has continued between independence-seeking guerrillas and the Indonesian military (TNI). In the 1990s international awareness began to grow as details of the conflict's more horrific atrocities reached Western news organizations. Indonesia faced mounting international criticism and threats of economic sanctions for its uneven stewardship of East Timor.¹



News media covering the fighting on East Timor. As many as 30,000 people were reported killed in the three-week rampage.

The conflict boiled over on 30 August 1999 after the results of a United Nations (UN)-sponsored referendum became public. The people of East Timor voted overwhelmingly to reject Indonesian rule in favor of independence. Supported by elements of the Indonesian army, local militia groups immediately began a rampage throughout East Timor. Unable to control the situation and with international pressure mounting, the Indonesian government reluctantly agreed to allow a UN-authorized force to enter East Timor.

On 15 September 1999, the UN authorized the creation of International Force-East Timor (INTERFET). Requesting support from other nations, Australia volunteered to take the lead and provide the bulk of the troops. INTERFET's mandate from UN Security Council Resolution 1264 was to restore peace and security in East Timor; protect and support the UN Mission in East Timor (UNAMET), the organization tasked with administering the referendum; and within force capabilities, provide humanitarian assistance.²

When the first Australian and coalition units arrived on 20 September, much of East Timor lay in smoldering ruins. News reports showed block after block of burned-out buildings in the capital, Dili. Most of the terrified populace had retreated into the hills or been rounded up and sent across the border either into Indonesian-controlled West Timor or neighboring islands. The press frequently reported that as many as 300,000 people had fled East Timor—out of a population of 850,000—and that most of those who remained were in the hills starving, too scared of the militia to return to the cities. Rumors abounded of Balkan-style atrocities. As many as 30,000 were reported killed in the three-week rampage.³

Forming US Forces INTERFET

On the same day that the UN authorized INTERFET, US President William J. Clinton established US Forces INTERFET (USFI). Clinton said that “a few hundred [personnel], in a clearly supportive capacity would deploy.”⁴ The United States would provide logistics, intelligence, communications, civil affairs, and operations and planning augmentees for the INTERFET staff.⁵ Commander in Chief, US Forces Pacific, Admiral Dennis Blair directed the III Marine Expeditionary Force (MEF) to establish a headquarters for USFI in Darwin.⁶ Blair designated US Marine Brigadier General John G. Castellaw as commander, US Forces

INTERFET. Most of Castellaw's key staff members came with him from the III MEF, but all Services provided individual augmentation.

The 613th Air Expeditionary Group, Pacific Air Forces, provided three C-130s. The US Navy initially supplied heavy-lift support, using helicopters from the amphibious ships USS *Belleau Wood* and USS *Peleliu*. The Army provided most of the intelligence and communications assets and all of the civil affairs support. All of the Services provided individual planning expertise to INTERFET, most notably on the C2, C5, C6, Air Coordination Command and Naval Coordination Command staffs. More than 6,000 US forces personnel eventually participated in Operation *Stabilise*, with the majority assigned to the two Marine expeditionary units/amphibious readiness groups that supported the mission. More than 230 US soldiers deployed to support Operation *Stabilise*, so at any time, about 70 percent of the ground forces in East Timor were Army.⁷

From Australia to East Timor

On 1 October, after establishing the headquarters and while gathering the support forces in Darwin, USFI began to send INTERFET planning staff augmentees and other mission-essential personnel into East Timor. The primary concern throughout the operation was force protection. Dili remained tense despite the arrival of INTERFET forces because of continued TNI presence, hidden militia members and skirmishes with Australians near the border. No one was really sure how the militia or the Indonesian army would respond to INTERFET. One militia leader boasted, "We East Timorese are thirsty for the blood of white people."⁸

Castellaw designated Army Component Commander Colonel Randolph P. Strong as Commander of US Forces-East Timor (USFET), subordinate to USFI.⁹ Strong and his staff deployed to Dili in mid-October. Most of the USFET staff came from Headquarters, US Army Pacific (USARPAC), with some augmentation from the other Services.

The USFI staff remained in Darwin.¹⁰ Remaining US forces deployed to East Timor when force-protection conditions allowed.

Intelligence support. USFI provided 46 personnel to INTERFET for intelligence support. Six personnel operated Trojan Spirit II, which downlinked classified information via satellite; eight others provided counterintelligence support and expertise; the rest were integrated into the INTERFET Command and Control staff.

US intelligence support personnel began to redeploy in mid-November, much earlier than originally planned. With the situation calming, INTERFET could assume US intelligence responsibilities. After demonstrating its reliability, the Australian Joint Intelligence Support System (JISS) replaced Trojan Spirit II in late November. The remainder of the intelligence support team redeployed after training their INTERFET counterparts.

Task Force *Thunderbird*. The 11th Signal Brigade, Fort Huachuca, Arizona, provided long-haul voice and data communication support to INTERFET. The brigade studied the requirements and tailored a communications support package based on INTERFET needs.

Task Force (TF) *Thunderbird* was the largest US asset in East Timor and by far the most expensive to bring into theater. It arrived at Darwin Royal Australian Air Force Base in 12 C-5s and one C-17 in early October.¹¹ At the height of the operation, communicators had 57 pieces of rolling stock and 83 soldiers deployed at six locations throughout East Timor, with another 40 remaining in Darwin to provide communications support



to USFI headquarters. Most of TF *Thunderbird's* equipment deployed to East Timor from Australia by sea. Like other assets, TF *Thunderbird's* elements often waited to move to their final locations while supported units made the necessary force protection preparations.

The East Timor communication infrastructure, largely destroyed during the militia rampage, had to be rebuilt before TF *Thunderbird* could redeploy. The Australian government contracted the rebuilding of the communication system, with a planned completion date of 15 December 1999.

The civil-military operations center. Twelve soldiers from B Company, 96th Civil Affairs Battalion, Fort Bragg, North Carolina, were the first US Army personnel to arrive in Darwin. Their mission was to establish a civil-military operations center (CMOC) in East Timor and then train INTERFET forces. The CMOC coordinated nongovernmental, private voluntary, and UN relief efforts with military operations.¹² Humanitarian assistance organizations benefited greatly by having access to military helicopters. The CMOC's efforts helped INTERFET facilitate humanitarian assistance.

Most of the civil affairs soldiers waited in Darwin until force protection conditions became acceptable. Before deploying to Fort Bragg, the 96th Civil Affairs Battalion established the CMOC and handed off control in early November to 10 US Army Reserve soldiers from the 322d Civil Affairs Battalion, Fort Shafter, Hawaii.

All civil affairs soldiers had the additional mission of working themselves out of a job—that is, teaching and training foreign soldiers assigned to the CMOC. From the beginning the goal was to hand over civil-military operations to other INTERFET forces as soon as they could operate the CMOC.

Heavy lift. The only way to bring food and supplies into the difficult-to-reach interior was by truck or helicopter. INTERFET forces lacked vertical lift, so some of the most important US lift assets were medium- and heavy-lift helicopters. From early October through November the *Belleau Wood* and *Peleliu* took turns providing CH-46 Sea Knight and CH-53E Super Stallion helicopters.

Operation *Kitchen Sink* was a typical heavy-lift helicopter mission that showed Army assets supporting

INTERFET. At one CMOC daily meeting, a representative from a relief organization requested assistance to transport kitchen utensils and other supplies to Suai, a small border town on the south coast. He had only one truck with which to move 12,000 pounds of supplies across Timor's spine. He estimated that getting the supplies to Suai would take at least two months, provided the monsoons did not wash out the dirt roads across the mountains. The 96th Civil Affairs Team at the CMOC referred him to the US Marine liaison officer from Dili, who coordinated with the *Peleliu* using communication equipment installed by TF *Thunderbird*. A few days later, two CH-53s moved the 12,000 pounds of supplies to Suai in one afternoon.

Replacing the *Peleliu* with another amphibious ship was simply too costly, so the US Pacific Command decided to contract the services, then tasked the US Navy to provide funding for heavy-lift helicopters.

Ironically, the Navy turned to the Army to administer the \$10-million contract. A contract representative from Army Materiel Command's newly formed Logistics Civil Augmentation Program Support Unit arrived in East Timor in mid-November to begin coordinating with INTERFET. The prime contractor, DynCorp, agreed to provide two Russian MI-26 Halo helicopters and two MI-8 Hip medium-lift helicopters. A new section of runway apron was built at Dili's Komoro Airport to accommodate the huge MI-26s. The MI-8s arrived first, with the MI-26s on station by mid-December. All four aircraft supported INTERFET missions from December 1999 through the end of February 2000.¹³

Force protection. In any deployment, balancing force protection requirements with mission needs is unavoidable and sometimes contradictory. Operating in a supporting role as part of a coalition further complicates the issues. Other armies may not share US force protection concerns. The contingents supporting Operation *Stabilise* were no exception.¹⁴

Protecting US forces meant ensuring that USFI had rock-solid measures in place, but establishing the appropriate level of force protection at ransacked and vandalized compounds took time.¹⁵ Until USFI had proper security, INTERFET staff augmentees worked in Dili but slept aboard US Navy ships anchored in Dili Harbor. By mid-October the main US compounds had adequate force protection in place, allowing US assets to stay permanently.¹⁶

Every nation involved in Operation *Stabilise* had different standards for force protection. Even within a nation's armed forces the standards varied from Service to Service and unit to unit. US measures for force protection were usually significantly more stringent than others.¹⁷

Before Americans could work at these locations, a USFI team inspected and certified them for force protection. The USFI team met with the supported officer in charge, reviewed the entire defense plan and explained what measures needed to be established. The team verified that the necessary corrections were in place before US personnel moved in. Castellaw decided which compounds met US force protection standards before US assets deployed to East Timor.

Most often the supported unit had some force protection measures already in place, but they were not considered adequate to protect US forces. In most cases the supported unit welcomed the US perspective and immediately improved security. However, several times supported units believed their security was adequate and that US personnel were being too rigorous. This disconnect required diplomacy, but foreign contingents understood that failure to provide adequate force protection would delay US support. In every case the host unit complied with requirements, and US forces moved in.

Sometimes various forces simply agreed to disagree. For example, after the monsoon's first rain season, backed-up sewers and drains flooded the INTERFET-run outdoor dining facility. The USFET preventive medicine noncommissioned officer recommended that US personnel return to meals, ready to eat, until several



Concertina wire, sand-bags, and a makeshift guard post improved security at the US forces headquarters compound, but generally USFI relied on coalition partners for force protection.

measures ensured that food preparation complied with US sanitary standards. The decision saved US personnel from the gastrointestinal illnesses that plagued other contingents.

The USFI established familiar force protection procedures. For example, any US citizen deploying to East Timor wore Ranger body armor or a flak vest; USFI monitored the movement of all personnel; and all vehicles carried communication equipment. Also, all US military personnel brought extra malaria pills, carried mosquito netting and wore permethrin-impregnated uniforms. Through these efforts—and good fortune—only one US soldier contracted a vector-borne disease. However, from 20 September 1999 to 1 April 2000, INTERFET and UN forces suffered 191 cases of malaria and 324 cases of dengue fever.¹⁸



(Left) The terrain and climate of East Timor made transportation a challenge and provided a breeding ground for disease. (Right) A giant MI-26 (note the man standing below the nose), one of four contract helicopters USFI provided for INTERFET. The heavy-lift helicopter contract was funded by the US Navy and administered by the US Army. The US prime contractor subcontracted Russian-built helicopters flown by former Warsaw Pact pilots to support an Australian-led coalition.

Unique, limited support. USFI was at the end of a long line of communication, brought only essential personnel, and supported missions planned largely by Australia and other INTERFET contingents. US forces were clearly members of the supporting cast—without a sector or area of responsibility of their own. In this environment, establishing a good working relationship with INTERFET was critical. Castellaw established rapport by assigning US liaisons to key INTERFET staff sections, which benefited both INTERFET and USFI. INTERFET received expertise and a visible sign of US commitment, and liaisons kept USFI informed of upcoming missions.

Because of limited assets, USFI often coordinated with INTERFET for logistic requirements, particularly transportation. Visiting dignitaries usually required

exercises. In fact, many personnel involved in Operation *Stabilise* had worked with familiar members from sister Services in one or more exercises. This experience reduced the time needed to integrate staffs.

In addition, as part of the ERP, Australia and Singapore regularly exchange officers with US units. Five Australian signal officers involved in Operation *Stabilise* were alumni of this program.²² One extraordinary example of the value of these exchanges involved TF *Thunderbird*. Australian Army Major John Wilson, a former exchange officer with the 11th Signal Brigade, served as a signal officer with Australia's Land Component Headquarters during Operation *Stabilise*. He was able to match Australian requirements precisely with US capabilities. "I could tell you what we needed right down to the bumper number on the vehicles," he claimed.²³



(Left) Australian soldiers patrolling East Timor. (Right) INTERFET Commander Major General Peter Cosgrove speaking with Brazilian troops in East Timor.



additional transportation and security. Since INTERFET also had limited assets, missions to support and dignitaries to entertain, meeting those requirements was not easy.¹⁹ Keeping a small footprint required innovation and flexibility to do more with less. For example, the J2 and J6 performed the additional duties of watch officer and public affairs officer.²⁰

"Mil-to-mil" engagement. USARPAC conducts 35 joint and combined command post and field training exercises annually as part of its Expanded Relations Program (ERP). Most of them involve one or more members of the Association of Southeast Asian Nations. In fact, at the same time Operation *Stabilise* began, so did *CROCODILE '99*, a combined Australian-US exercise. These exercises train US soldiers and strengthen the relationship between the United States and its allies.²¹

A useful byproduct of these exercises is the interaction among the Services. Within a three-year tour, soldiers often find themselves working with the same sailors, airmen, and Marines with whom they worked in earlier

Redeployment strategy. Before all US assets deployed to East Timor, Castellaw began devising a redeployment strategy. Fortunately, even as early as October, the situation in East Timor appeared to be improving. The Indonesian army began to evacuate its forces, and when unrepentant militia stood and fought, they lost to INTERFET ground forces in lopsided border skirmishes. The timetable for completing the mission was actually pushed forward. Based on INTERFET's goal to complete the peace enforcement by 15 January 2000, Castellaw's goal for the redeployment of US assets was 15 December 1999.²⁴

The ambitious time line forced USFI to define the end state quickly and begin executing actions necessary to meet the target date. The key step was determining when US support would no longer be required. The supporting US role made it easier for USFI to plan and execute its exit strategy.²⁵ Castellaw based redeployment time lines on successfully setting up commercial alternatives, training replacement forces, and knowing US support was no longer required.

Castellaw briefed INTERFET Commander Major General Peter Cosgrove on the redeployment plan.²⁶ Cosgrove supported the plan and ensured Australian communication contractors stuck to their time line, which was crucial to TF *Thunderbird*'s redeploying on schedule. US forces redeployed as the mission and available sea and airlift allowed.

The last major US Army element to leave East Timor was TF *Thunderbird*, which remained until most of the commercial communication system was up and running. Except for three officers left behind on the INTERFET staff, the last 50 soldiers, sailors, airmen, and Marines redeployed to Darwin on 17 December. The mission was successful, with no embarrassing incidents or US casualties.

The US effort in East Timor validated the concept of focused US support as a subordinate command in successful multinational peace operations. Establishing a joint headquarters helped US forces translate national commitment into the right troop-to-task support. Although it is difficult to quantify the benefit of combined exercises and officer exchanges, these opportunities smooth operations with allies when crises arise. The ubiquitous US concern with force protection can be reconciled within a coalition without putting US forces at unnecessary risk. Finally, a supporting US role helps establish exit criteria and the early redeployment of US forces.

During Operation *Stabilise*, US participation was meager in comparison to the 8,000 personnel sent by the other INTERFET forces, yet US assets were significant force multipliers. US support—communications, intelligence, civil affairs, heavy lift, and planning expertise—is typical of the unique and important assets that many US allies lack and the kind that will most likely be requested in future operations.

Endnotes:

¹US Department of Defense, "East Timor," *INTERFET Handbook* (October 1999), 36-37.

²UN Security Council Resolution 1264, para 3, available online



TF *Thunderbird*, based at the ravaged Dili University compound, provided critical secure and nonsecure voice and data communications to both INTERFET HQ and US forces. TF *Thunderbird* made up almost half of US personnel deployed to East Timor.

at <www.un.org/peace/etimor/docs/9936481E.htm>.

³The reports of those killed by the militia were exaggerated. Although the militia committed some gruesome atrocities, at the end of November 1999, just under 700 bodies had been discovered. Reports of thousands of starving Timorese also appear overblown.

⁴"Remarks made by US President William J. Clinton upon departure from Auckland, New Zealand," available online at <www.fas.org/mad/dod-101/ops/docs99/990914-timor-wh1.htm>.

⁵*US Forces INTERFET After Action Report* (USFI AAR), Part I, "Executive Overview" (11 February 2000), 1. Part II contains the detailed individual lessons learned.

⁶ADM Dennis Blair decided not to stand up a joint task force (JTF) because of the US supporting role. Instead of JTF *East Timor*, the US effort became known as US Forces INTERFET (USFI). For a discussion of how that decision affected the mission, see the USFI AAR, Part I.

⁷*Ibid.*

⁸Ron Moreau and Jeffrey Bartholet, "Marching Into a Trap," *Newsweek* (22 September 1999), available online at <www.newsweek.com/nw-srv/printed/int/asia/ovin0313_1.htm>.

⁹COL Randolph P. Strong, a signal officer with previous contingency operations experience in Bosnia, is also Commander, 516th Signal Brigade and Deputy Chief of Staff, Information Management (DCSIM), USARPAC, Fort Shafter, Hawaii.

¹⁰Both BG John Castellaw and COL Strong arrived with a core of Marines and soldiers who had worked together at their home stations. On the ground, and as the mission's size and scope clarified, each commander augmented his staff with subject matter experts. Strong's J2, J3, J4, and J6 staff included US Army officers from USARPAC. The J1, camp commandant, operations noncommissioned officer (NCO)

and Marine expeditionary unit (MEU) liaison officers were Marines; the preventive medicine NCO was Navy; and the Catholic chaplain was Air Force.

¹¹Bill McPherson, "The East Timor Tapes: An Interview with Colonel Randolph P. Strong, Commander, US Forces East Timor (October-December 1999)" *Pacific Voice* (Special Edition, Spring 2000), 15.

¹²US Army Field Manual (FM) 100-23, *Peace Operations* (Washington, DC: US Government Printing Office, December 1994), 40.

¹³James Folk and LTC Andy Smith, "A LOGCAP Success in East Timor," *Army Logistician*, July-August 2000, available online at <www.almc.army.mil/alog/julaug00/ms566.htm>. This issue contains a special section devoted to East Timor, particularly contracted support.

¹⁴To some, US insistence on adequate force protection before moving in was, to paraphrase one INTERFET officer, "beneath the world's only superpower." The US interest in force protection substantially improved everyone's security but may have cost some credibility by insisting on better force protection conditions than our coalition partners thought necessary.

¹⁵"DOD News Briefing" (12 September 1999), available online at <www.fas.org/man/dod-101/ops/docs99/t09141999_trfg-914.htm>.

¹⁶Most US forces lived and worked in the "cultural section" downtown Dili. USFET headquarters was the former home of the labor ministry, while TF *Thunderbird* shared the partially destroyed Dili University compound with an Australian topographic unit.

¹⁷During the height of US support to Operation *Stabilise*, the United States provided personnel in five towns in East Timor. Within Dili, USFI supported INTERFET at six locations. Within the "Dili Precinct" (a guarded and patrolled area of about five square blocks located in the city center), US personnel worked and lived at six compounds. US forces coordinated force protection requirements with Australian, New Zealand, Thai, Brazilian, Filipino, and British forces.

¹⁸"Malaria, Dengue Take Toll on Troops," *The Age* (Melbourne, Australia) available online at <www.theage.com.au/breaking/0004/03/A46759-2000apr3.html>.

¹⁹During one memorable discussion while coordinating for two US senators' visits, an exasperated Australian army major in the INTERFET visitor's coordination cell asked me a series of questions on the US legislative branch: "How many congressmen do you have?" "How many senators?" I was mildly impressed that he took such an interest until his last

question: "And how many of them intend to visit us?"

²⁰USFET entertained many dignitaries, including six generals, three ambassadors, and several other officials, so public affairs became a significant additional duty.

²¹"Expanded Relations Program," available online at <www.usarpac.army.mil/docs/expan.htm>.

²²Robert K. Ackerman, "U.S. Forces Provide Deployable Communications to East Timor," *Signal*, April 2000, 45.

²³Dennis Steele, "End State," *Army Magazine*, available online at <www.ausa.org/armyzine/steele3feb00.html>.

²⁴In October, MG Cosgrove told his staff that the target date for changing the flag from INTERFET to the UN Transitional Administration-East Timor (UNTAET); that is, when the mission could change from peace enforcement to nation building, was 15 January 2000.

²⁵USFIAAR, Part I, 25.

²⁶Mission Analysis/Redeployment Briefing given to Cosgrove in Dili on 11 November 1999.

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Photos:

Journal do Exército

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Asia-Pacific Defence Reporter

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Proliferation Security Initiative: Lessons from a Cooperative Framework

*Lt Col Michele Cook, USAF
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It's all about cooperation. Proliferation Security Initiative (PSI) is a new tool in the non-proliferation of weapons of mass destruction (WMD) toolkit, but the lessons being identified in PSI activities aren't new. The recurring operational level lessons identified from PSI war games and exercises are the same recurring themes from coalition and alliance operations and exercises involving the U.S. military worldwide. What may be unique is the framework for PSI actions and the implementation process for turning the lessons into reality.

PSI is inherently defined as an activity, not an organization. It is a global effort aiming to stop shipments of WMD, their delivery systems, and related or precursor materials worldwide. The December 2002 National Strategy to Combat WMD recognizes the need for robust tools to fight proliferation worldwide. As one of those tools, PSI has proven its effectiveness and provides a forum for using existing authorities to cooperate internationally to defeat proliferation. It is important to understand that PSI is not an alliance or a coalition; it is a grouping of nations working together toward a common goal using existing national and international legal authorities to achieve that purpose.

Since President Bush announced PSI in May 2003, it has grown to a cooperative of over 60 countries with varying levels of participation. Each country uses its national assets as it sees fit; accordingly, a nation's military may not be involved at all, or it may be supporting to some other national entity such as a national coast guard or customs agency. PSI participants are deeply concerned with the danger of WMD materials falling into the hands of terrorists, and are committed to working together to stop the flow of these items between states and non-state actors of proliferation concern.

United States Strategic Command's (USSTRATCOM) mission set includes deterring and defending against the proliferation of WMD, and as such, USSTRATCOM is furthering the development of PSI within the U.S. military. USSTRATCOM recently hosted the PSI Operational Experts Group (OEG) at Omaha, Nebraska, and lessons from various exercises were presented. The OEG meets quarterly in a PSI nation to further PSI initiatives, set an exercise schedule, and explore issues with regard to diplomatic, intelligence, legal, and operational considerations.

Often, participants from recent exercises and PSI forums identified their issues during their respective out briefs. To ensure that lessons identified during war games and exercises were carried forward, the United Kingdom (UK) contingent of the PSI OEG developed a template for submitting lessons, and will establish an initial repository to help structure future exercises and war games. While this doesn't guarantee success with respect to "learning" lessons, it does allow each country

access to the experiences of others to build on lessons from the past. It should come as no surprise that the issues identified in PSI exercises are familiar to the U.S. military; rarely are we faced with entirely new situations. This article is an attempt to bring several complementary efforts into one place for public discussion.

The lessons provided below are neither meant to be conclusive nor all encompassing. Instead, they represent a pass-down of data from previous experiences of those participating in PSI activities. UK representatives from the Omaha PSI meeting provided many of the following issues.





communication methods and channels from tactical to strategic, and across governments, require further development and should be routinely exercised.

5. Full consideration of political, legal, and operational constraints must be made during mission analysis. Rules of engagement may vary widely between nations, and international legal implications must be considered. PSI methods should take advantage of international treaties, boarding agreements, legal mechanisms, and existing regional frameworks for the prevention of crime.

1. Coordination of intra and inter-governmental decision-making processes is key to effectively utilizing national resources to interdict a shipment. This process must involve all agencies associated with counterproliferation efforts. As nations will develop different courses of action for the same scenario, effective communication becomes essential. Governments can take advantage of differing political positions through agreed upon action, while a lack of agreement can interfere with interdiction objectives.
2. PSI is a cooperation-based effort. Hence, not all nations will be involved in an interdiction event, nor should they be. In real interdiction situations, one or two nations may possess all the knowledge, while others facilitate the interdiction but only require peripheral involvement.
3. Coordinated information operations and public affairs should be part of the plan, not an add-on or afterthought. If the exercises are to achieve the purpose of deterrence, they must be well-publicized and coordinated to present one message to the media, the public, and other nations. As part of a PSI exercise in October 2004, Japan had extensive media coverage, prompting numerous international press articles. That type of governmental and media cooperation could be used as a template for future exercises.
4. Rapid and accurate exchange of information at all levels is essential to operational success. Secure
6. Where possible, standard operating procedures (SOP) for dealing with PSI issues should be developed, to include command and control methods to reach back to national centers for technical expertise.
7. Inclusion of realistic intelligence play may carry political risks and considerations, but is crucial to development of operational capability. Ambiguity with regards to intelligence is realistic, and political decisions will be dependent upon the fidelity and confidence of available intelligence.
8. While experience in counterterrorism and counterdrug operations is invaluable, many of the procedures born of that experience are not appropriate for WMD interdiction. New procedures in accordance with existing laws may be required.
9. Exercises should be used both to build the knowledge base of new PSI participants and to further previous scenarios, tackling tougher issues over time. Many difficult issues as scripted in the scenarios are time consuming, but should be explored rather than assumed. As an example, explore national considerations for using intelligence information in legal proceedings rather than assuming the information gathered will stand up in court.
10. The actual intercept may be the easiest part of the process, and represents a very short period of time. Requirements for success include actionable

intelligence, effective information sharing, command and control and decision-making, and political commitment – all of which take time. Where possible, standardization of procedures, checklists, and PSI contacts will facilitate the entire process.

11. Learn from each other. Each nation brings national strengths and challenges to the table, and everyone can benefit from an honest assessment of capabilities and shortfalls. If one partner nation is struggling with an issue, then it is likely that others are as well, and one may be further down the road to a solution. Canada has implemented an interagency command and control system that allows for one national PSI contact venue. Will this approach work for others?

Many issues are not identified here, some of which are clearly outside of the U.S. military's capabilities. Commercial industries involved in air cargo, maritime shipping, and overland transshipment are also part of our solution set, and industry outreach is a key effort. Coordination across the interagency realm within the U.S. may be as difficult or more difficult than cross-

governmental coordination, as roles and missions are still being defined.

Lessons learned implementation is on the forefront of issues being studied by the PSI OEG. At present, the UK will collect the lessons, and make them available to all in an unclassified forum. All participants are welcome to participate. Exercise scenarios are built with those lessons in mind, but ultimately each nation may choose to incorporate lessons as they see fit.

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Editor's Note: Photos provided from PSI Exercise CHOKEPOINT 04.



ACT process similar to JFCOM's NATO Command Fine Tunes Operational Lessons Learned Practices

*By Keith J. Costa
February 10, 2005*

North Atlantic Treaty Organization (NATO) officials at Allied Command Transformation (ACT) in Norfolk, Virginia, are fine tuning methods for gathering lessons about operations in Iraq and Afghanistan, according to the outfit's deputy commander. Collecting and then applying such lessons is one of the core missions for ACT, which is charged with revamping the alliance so that it can better address 21st-century threats, Royal Navy Adm. Mark Stanhope told Inside the Pentagon in a recent interview. Stanhope was appointed Deputy Supreme Allied Commander Transformation last July, taking time in the past six months to visit major facilities under ACT's purview.

Much of the ACT's "lessons learned" work takes place at the command's Joint Analysis and Lessons Learned Center (JALLC), co-located with the Portuguese Air Force's headquarters in Lisbon. JALLC had been focused on lessons learned from NATO exercises, but the push for transformation led officials to broaden the outfit's mission area so that analysts also examine experience in alliance operations. NATO runs the International Security Assistance Force (ISAF) in Afghanistan and helps train Iraqis in their fight against insurgents.

An important goal is quickening the pace of feeding analysis to decision-makers throughout NATO. The time frame for that process in the past "was very much longer than what we require today," Stanhope said. "We're doing a great deal to, if you like, turn the handle much, much faster." One step taken in that direction is embedding analysts with forces in Iraq and Afghanistan, he added. In key respects, ACT's approach to gathering and applying lessons learned is patterned after the process employed by U.S. Joint Forces Command, which plays a pivotal role in Defense Department transformation efforts.

U.S. Joint Forces Command (JFCOM) has its own Joint Center for Operational Analysis-Lessons Learned for

collecting, processing and distributing observations at the operational level of war. Based in Suffolk, VA, the outfit also reviews training events as part of JFCOM's work to enhance joint warfare capabilities, according to a command fact sheet.

There are "close links" between JALLC and JFCOM's lessons learned center, Stanhope said. However, ACT's efforts to disseminate lessons learned can be complicated when working in a 26-nation alliance — largely managed by consensus — as opposed to what transpires in a national or tightly knit coalition context. Among the allies, "there is synergy, but there has to be a clear recognition of some of the sensitivities and difficulties in [exposing] carte blanche all lessons identified," the admiral said.

Similar to JFCOM in the U.S. military, ACT is well-positioned to help ensure that lessons learned take root throughout the alliance because it also plays key roles in training NATO personnel and developing doctrine, alliance officials say. The fact that ACT in many ways parallels JFCOM in mission and organizational structure is no coincidence. Both were created to help transition militaries once geared to fighting the Cold War so they can get ready for the uncertain security environment that emerged after the Soviet Union's demise. The Sept. 11 terrorist attacks reminded officials of the serious threat to allies posed by terrorists seeking weapons of mass destruction.

Further, ACT and NATO are both headed by U.S. Navy Adm. Edmund Giambastiani. NATO established ACT in June 2003. The alliance needed to retool and shift armies to a more expeditionary footing so that it can execute missions beyond Europe and North America, NATO officials said leading up to the decision to create ACT. With that in mind, members at the alliance's November 2002 Prague summit agreed to create a NATO Response Force, and getting it up and running became one of ACT's top priorities. The rapid-reaction force achieved initial operational capability last October. NATO hopes to reach full operational capability — with 21,000 troops — in fall 2006. (*ITP*, June 10, 2004, p1)

The NATO Response Force "will be a coherent, high readiness, joint, multinational force package, technologically advanced, flexible, deployable, interoperable and sustainable," an alliance fact sheet reads. The force will be organized so that it can be tailored for specific operations, or it could function as

part of a larger grouping conducting a wide range of military activities, according to the fact sheet. NATO wants the rapid-reaction force to be able to sustain itself for a month or longer if resupplied. Member states will offer troops and equipment for the force — contributions will “rotate through periods of training and certification as a joint force, followed by an operational ‘stand-by’ phase of six months,” the fact sheet states. Further details on NATO Response Force composition are under review, it adds.

Work on the Response Force is expected to be a catalyst for finding ways to enhance overall NATO capabilities, the fact sheet says. Part of the impetus to establish ACT was a concern that the United States would outpace the allies in transformation. “Three years ago, the change in pace of transformation [for the United States] started to be very well recognized within the NATO alliance, and the understanding that the pace of [U.S.] development would start to reduce the ability of the alliance to operate with” American forces, Stanhope said. “There was a fear that the best of the [allies’] abilities might not meet, or be able to fill a delta, between where the [United States was] going and where many nations within the NATO alliance were finding themselves.”

Given the importance attached to promoting transformation, NATO chose “to build Allied Command Transformation . . . to replace Supreme Allied Command, Atlantic, and to [place it] alongside Joint Forces Command, with the same head, to ensure the synergy of our respective developments,” the admiral said. At the same time, NATO streamlined its operational command structure. As indicated by the emphasis both commands place on operational lessons learned, ACT and JFCOM efforts to push transformation go beyond developing new technology. Both commands use a definition of transformation that encompasses “intellectual, cultural and technological change,” Stanhope said.

ACT officials view transformation as a “proactive” process involving defense planning, concept development and the enhancement of collaboration between nations. “You can’t wait for it to come to you,” the admiral said. “It’s not simply the building of huge, impressive technological networks that bind us together,” the admiral added. “They, indeed, are

important, and may underlie some of the way we move forward, but it’s as much about how we use information, how we get information, how we spread information, [and] how the doctrine we have support the use of information.”

ACT’s so-called “implementation arm” for transformation is the Joint Warfare Center, activated in October 2003 and based in Stavanger, Norway, according to the center’s Web page. The organization “facilitates the delivery of training solutions, experimentation and interoperability whilst taking forward new doctrine and concept development into training events and ensuring that Integration and Standardization, the bedrocks of NATO, remains a key deliverable,” the site states. The Joint Warfare Center is “principally focused on the operational level of command,” Stanhope said. “All the NATO commanders going out to ISAF in Afghanistan and, indeed, those standing up in the command of the [NATO Response Force] are all trained there before they take over their responsibilities.”

At Stavanger, teams are brought together in an office setting for a few weeks to “get them up to speed” on NATO command and control processes and a host of challenges they likely will face, the admiral said. NATO, however, is not in the process of implementing an approach to training that is on par with the Pentagon’s Joint National Training Capability. JNTC involves live exercises in places like Ft. Irwin, CA, augmented by computer simulations, with troops also participating from remote locations using networked technology. The United States is “moving very, very quickly, and, in transformational terms, [it is] going down a quite resource-heavy” path, Stanhope said. “We in NATO would love to follow that down. I think the aspirations, though, at the moment are more than any resource we could bring to bear to achieve this.” Thus, NATO is focusing on the Joint Warfare Center and other training activities “without the live piece attached to it, bearing in mind, too, that NATO does do a regular package of live exercises on a rolling program,” he said. — *Keith J. Costa*

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Canadian Forces (CF) Joint Staff: Profile On J7 Lessons Learned

Located at National Defence Headquarters in Ottawa, Ontario (Canada), J7 Lessons Learned (J7 LL) is the strategic-level LL organization of the Canadian Forces (CF) Joint Staff. The J7 LL section is comprised of six officers, headed by a lieutenant colonel and contained within the Directorate of Plans, Doctrine, and Training. Recently, due to events on international operations, the section has embarked upon an ambitious initiative to dramatically re-engineer how analysis and LL will work in the CF.

Working in cooperation with their Navy, Army, and Air Force counterparts (which operate primarily at the operational and tactical levels), J7 LL is taking the lead in integrating the efforts of the entire CF LL community. Recent initiatives include the drafting of an overarching CF LL policy and the formation of the CF LL Board (CFLLB). The CFLLB consists of members from each of the Service LL organizations, plus others as required. Its primary function is to provide a venue to harmonize and coordinate the efforts of the major CF LL organizations in order to improve pan-CF awareness, address and resolve issues affecting the CF LL community, and avoid duplication of effort. The first meeting of the CFLLB was held the end of March 2005, with future boards to be conducted four times each year.

J7 LL and its Service equivalents each create a Critical Topic List (CTL), which determines where respective efforts will be focused. The CTLs are command-driven and dictate what areas of concern are to be studied, and in what priority. It is then up to the applicable LL organization to choose the most appropriate venue to conduct the study in question. Through the CFLLB, the CTLs are presented and an annual LL action plan (LLAP) is formulated. The LLAP drives specific analysis objectives, the collection and analysis plan, and the overall level of analysis. Data is collected, reduced, reconstructed, and analyzed with the results reported to the Deputy Chief of Defence Staff (DCDS) or equivalent Service authority. The J7 LL reporting document, the LL staff report, includes observations, supporting discussions, conclusions, and recommendations. The DCDS staff (or similar staff at the operational and tactical levels) then takes action as appropriate to correct deficiencies or ensure successes are repeated, with results reported back to J7 LL for tracking purposes.

Of particular significance, J7 LL has initiated the development of a globally accessible database system, to be known as the CF LL Knowledge Warehouse (CFLLKW). The CFLLKW will be a single-source LL database to be used by everyone from LL members, to deployed commanders and personnel, to planning staff, and to those conducting research. It will permit anyone to input data and observations,



Sample screenshot: the CFLLKW will bring the CF to the forefront of Knowledge Management with one stop shopping for the international LL community.

automatically catalogue and categorize data, track and advise of outstanding issues, supply on-line reporting to the chains of command, and incorporate a chat room function. While it cannot and will not replace human effort, the CFLLKW will be a powerful tool for improving the flow of information, enabling more efficient knowledge management and streamlining, and modernizing the current LL process. The CFLLKW will initially be a pan-CF database, but it is intended that the system will be expanded to permit information sharing with allied and like-minded nations and

coalitions; including the U.S. Joint Forces Command, North Atlantic Treaty Organization, Joint Analysis and Lessons Learned Center, and the United Nations, to name but a few. The CFLLKW is scheduled for rollout in May 2006.

If you would like to know more about J7 Lessons Learned, or any of the other Canadian Forces lessons learned organizations, please contact LCol Sandy Robertson at (613) 992-6508 or Robertson.AF@forces.gc.ca.

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